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RAISING AMERICA'S PAY

Why It's Our Central Economic Policy Challenge

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This report is the first in a series from **Raising America's Pay,** a multiyear research and public education initiative of the Economic Policy Institute to make wage growth an urgent national policy priority. Raising America's Pay identifies broad-based wage growth as the central economic challenge of our time—essential to alleviating inequality, expanding the middle class, reducing poverty, generating shared prosperity, and sustaining economic growth. *epi.org/pay*

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Introduction and executive summary

Our country has suffered from rising income inequality and chronically slow growth in the living standards of low- and moderate-income Americans. This disappointing living-standards growth—which was in fact caused by rising income inequality—even preceded the Great Recession. Fortunately, income inequality and middle-class living standards are now squarely on the political agenda. But despite their increasing salience, these issues are too often discussed in abstract terms. This paper—and the Raising America's Pay project that it launches—exposes the easy-to-understand root of rising income inequality, slow living-standards growth, and a host of other key economic challenges: the near stagnation of hourly wage growth for the vast majority of American workers over the past generation.

It should not be surprising that trends in hourly wage growth have profound consequences for American living standards. After all, the vast majority of Americans rely on their paychecks to make ends meet. For these families, wages and employer-provided benefits comprise the bulk of income, followed by other income sources linked to labor market performance, such as wage-based tax credits, pensions, and social insurance. Even for the bottom fifth of households, wage-related income accounts for the majority of total income. Indeed, wage-related income has been a growing share of total bottom-fifth income over time, as the safety net shifts toward wage-related income supports (such as the earned income tax credit) while non-wage-related supports (such as Temporary Assistance for Needy Families) decline.

The clear connections between wages, income, and living standards mean that progress in reversing inequality, boosting living standards, and alleviating poverty will be extraordinarily difficult without addressing wage growth. Indeed, converting the slow and unequal wage growth of the last three-and-a-half decades into broad-based wage growth is the core economic challenge of our time.

Slow and unequal wage growth in recent decades stems from a growing wedge between overall productivity and pay. In the three decades following World War II, hourly compensation of the vast majority of workers rose in line with productivity. But for most of the past generation (except for a brief period in the late 1990s), pay for the vast majority has lagged further and further behind overall productivity. This breakdown of pay growth has been especially evident in the last decade, affecting both college- and non-college-educated workers as well as blue- and white-collar workers.

This paper argues that broad-based wage growth is necessary to address a constellation of economic challenges the United States faces: boosting income growth for low- and moderate-income Americans, checking or reversing the rise of income inequality, enhancing social mobility, reducing poverty, and aiding asset-building and retirement security. The paper also points out that strong wage growth for the vast majority can boost macroeconomic growth and stability in the medium run by closing the chronic shortfall in aggregate demand (a problem sometimes referred to as "secular stagnation"). Finally, the paper argues that any analyses of the causes of rising inequality and wage stagnation must consider the role of changes in labor market policies and business practices, which are given far too little attention by researchers and policymakers.

The paper's key data findings include:

Despite increasing economy-wide productivity, wages for the vast majority of American workers have either stagnated or declined since 1979, and this weak wage growth extends even to those with a college degree.

- Since 1979, hourly pay for the vast majority of American workers has diverged from economy-wide productivity, and this divergence is at the root of numerous American economic challenges.
    - Between 1979 and 2013, productivity grew 64.9 percent, while hourly compensation of production and nonsupervisory workers, who comprise 80 percent of the private-sector workforce, grew just 8.2 percent. Productivity thus grew eight times faster than typical worker compensation.
    - Much of this productivity growth accrued to those with the very highest wages. The top 1 percent of earners saw cumulative gains in annual wages of 153.6 percent between 1979 and 2012—far in excess of economy-wide productivity.
- Hourly wages of the vast majority of American workers have either stagnated or declined since 1979, with the exception of a period of strong across-the-board wage growth in the late 1990s.
    - Median hourly wages rose just 0.2 percent annually between 1979 and 2013, compared with an annual decline of 0.2 percent for the 10th percentile worker (i.e., the worker who earns more than only 10 percent of workers) and an annual gain of 1 percent for the 95th percentile worker.
    - Between 2000 and 2013, hourly wages of the vast majority of workers either fell (bottom 30 percent) or were essentially flat (next 40 percent), and only the 95th percentile saw wage growth closely approaching 1 percent annually.
    - The late 1990s was the only period between 1979 and 2013 when wage growth was robust and broadly shared; in fact, wage growth was actually strongest for the bottom 40 percent.
- While wage disparities by gender have gradually narrowed over the last three-and-a-half decades, wage disparities by race and ethnicity have not narrowed.
    - Gaps between women's and men's hourly wages have been slowly narrowing since 1979. However, the higher up the wage distribution one looks, the slower the progress has been. Among women workers, the hourly wage at the 10th percentile was 91.8 percent of men's 10th percentile wage in 2013, while women's median wage was 83.4 percent of men's median wage, and women's 95th percentile wage was 76.1 percent of men's 95th percentile wage.
    - Gaps between hourly wages of black and Hispanic workers relative to white workers have not closed over time. These gaps have remained essentially unchanged at the low end of the wage distribution, and have actually been widening at higher levels.
- Weak wage growth extends even to those with a four-year college degree, while those with a high school degree and no further education have fared even worse.
    - The vast majority of college graduates have seen only small wage gains since 2000. Even at the 90th percentile, college graduates' hourly wages only increased 4.4 percent *cumulatively* from 2000 to 2013.
    - Entry-level hourly wages *fell* on average for both female and male college graduates from 2000 to 2013 (8.1 percent among women and 6.7 percent among men).

- Workers without a four-year degree have fared even worse over the entire 1979 to 2013 period, as the ratio of wages for college-educated workers relative to this group expanded rapidly in the 1980s and early 1990s, and has grown (albeit much more slowly) since.

Inequality fueled by broad wage stagnation is by far the most important determinant of the slowdown in living standards growth over the past generation, and it has been enormously costly for the broad middle class (households between the 20th and 80th income percentiles).

- Between 1979 and 2007, more than 90 percent of American households saw their incomes grow more slowly than average income growth (which was pulled up by extraordinarily fast growth at the top).
- By 2007, the growing wedge between economy-wide average income growth and income growth of the broad middle class—a wedge we sometimes refer to as the "inequality tax"—reduced middle-class incomes by nearly $18,000 annually.
- Slow income growth for most American households is mainly due to weak hourly wage growth. In 1979, labor income accounted for 85.1 percent of total income for non-elderly households[1] in the broad middle class, yet hourly compensation growth accounted for only about 17 percent of the *increase* of household incomes between 1979 and 2007—meaning it punched far below its weight.
    - All of hourly compensation growth for the broad middle class occurred between 1995 and 2000.
    - Rising hours of work (as opposed to higher hourly compensation) accounted for roughly two-thirds of the rise in labor income between 1979 and 2007 for this group of non-elderly households in the broad middle class.

The failure of wages to grow for the vast majority is the leading reason why progress in reducing poverty has stalled over the last three-and-a-half decades.

- Wage-driven inequality has severed the link between poverty reduction and overall economic growth. If poverty reduction and growth were correlated as tightly as they were between 1959 and 1973, growth would have driven the poverty rate, which grew from 11.7 percent in 1979 to 15.0 percent in 2012, to essentially zero by now. This general finding remains true even when using alternative measures of poverty, such as the supplemental poverty measure (SPM).
- From 1979 to 2012, the impact of rising inequality was nearly five times more important in explaining poverty trends than changes in family structure, while rising educational attainment of low-wage workers actually put downward pressure on the poverty rate over that time.
- Wage growth is key to poverty reduction: The bottom fifth of non-elderly American households relied on work-related income (wages, benefits, and wage-based tax credits) for more than *two-thirds* (69.7 percent) of their total incomes in 2010.

Key economic evidence implicates policy decisions—and particularly changes in labor market policies and business practices—as more important in explaining the slowdown in hourly wages for the vast majority than many commonly accepted explanations (such as the interaction between technological change and the skills and credentials of American workers).

- Various wage gaps reflect the relative strength of policy changes in affecting Americans' wages, as compared with other influences (such as the interaction of technology and education).
    - The timing of changes in the gap between wages at the middle and bottom of the wage distribution (or, the "50/10 wage ratio") suggests that changes in the minimum wage and the unemployment rate explain most of its evolution.
    - The gap between wages near the top of the wage distribution and the middle (or, the "95/50 wage ratio") has grown much faster since 1995 than have the returns to a four-year college degree. This suggests that rising demands for this credential cannot explain the bulk of changes in the 95/50 ratio since then.
    - The wage gap between those in the top 1 percent and other very high-wage workers (those between the 90th and 95th percentiles) rose faster and more consistently than any of the other wage gaps examined in this paper. As the top 1 percent is dominated by corporate managers and finance-sector professionals, this suggests these wage trends are driven in large part by developments in corporate governance and financial regulation that have given those at the very top the bargaining power that allows them to claim economic rents.
- Direct evidence highlights the key roles of the two most-visible and well-documented changes in labor market policy and practice over the past generation in driving wage trends: the erosion of the inflation-adjusted value of the federal minimum wage and the sharp decline in the share of the American workforce represented by a union.
    - Between the 1970s and the late 2000s, the eroded minimum wage explains roughly two-thirds of the growing wage gap between low- and middle-wage workers, and weakened unions explain a fifth to a third of the entire rise of wage inequality.

EPI's Raising America's Pay initiative highlights labor market policies and business practices behind poor wage growth

Aside from reviewing trends in hourly labor compensation and linking these trends to front-burner issues in American economic life, this paper also serves as background for a larger project centered at the Economic Policy Institute—the Raising America's Pay project. Raising America's Pay is a multiyear research and public education initiative to make wage growth an urgent national policy priority. Raising America's Pay aims not just to highlight the central role of hourly wage performance in American economic life, but also to suggest concrete remedies for the disappointing wage growth experienced by the vast majority since 1979.

We have noted in past work (see Mishel et al. 2012 and Bivens 2011) a number of influences that can help explain why the wages of the vast majority have grown so much more slowly than economy-wide productivity. These influences include integration of the U.S. and the much-poorer global economy on terms deeply damaging to the vast majority of American workers, the failure of macroeconomic policymakers to aggressively pursue genuinely full employment, steep cuts to top marginal tax rates that have greatly increased the motive for well-placed economic actors to fully wield their economic power to tilt the distribution of rewards their way, deregulation of the financial sector that has led to greater risk and reward for financial managers without leading to better economic outcomes, and the continuing failure of corporate governance to rein in executive compensation.

While we touch on some of these influences in this paper, Raising America's Pay seeks to give overdue recognition to the labor market policies and business practices that have suppressed wage growth by robbing American workers of key protections and diluting their bargaining power. As just noted, the most obvious examples of corrosive policies and practices are the continued erosion of both union coverage and the real (i.e., inflation-adjusted) value of the federal minimum wage. But a range of other, less visible factors have also undercut pay, from the inappropriate classification of employees as independent contractors to increasing incidence of "wage theft" that occurs when workers—particularly low-wage and immigrant workers—are not paid for the work they have performed. Indeed, those looking to boost the bargaining power of employers have fought efforts to allow certain low-wage workers to qualify for overtime pay and have tried to impede institutions that help thwart wage theft.

Besides erosion of union coverage and the real value of the minimum wage, many of these changes to labor market policies and practices likely would not by themselves move the dial on overall wage trends. However, as a group they could have measurable effects. Representatives of employers' interests surely conceive of them as important, as they spend great effort and money to weaken standards and institutions that provide labor market protections at the federal and state levels (Lafer 2013). Future research conducted as part of the Raising America's Pay initiative will identify and assess changes in labor market policies and business practices that will generate substantial broad-based wage growth.

Structure of the paper

The rest of the paper is structured as follows: Section one details trends in wages (mostly hourly wages) across the American wage distribution in recent decades. Section two shows how these wage trends are the driving force behind rising inequality of household incomes and the sluggish growth of living standards for the vast majority in recent decades. Section three highlights the crucial link between stagnant wage growth in the bottom fifth of the wage distribution and faltering progress in reducing poverty in recent decades. Section four discusses how hourly wage growth is crucial in making progress on a range of other economic challenges—including wealth accumulation and retirement security, social mobility, and macroeconomic stability. Section five draws policy conclusions from the assembled evidence, and the paper concludes by identifying promising future research opportunities.

Section One: Trends in American wages

This first section provides a detailed overview of trends in wages and compensation (including employer-provided benefits such as contributions to pensions and health insurance premiums) for the vast majority of American workers in recent decades. It pays particular attention to growth in *hourly* compensation when possible, simply because rising annual earnings obtained by working more hours cannot be fairly classified as an increase in Americans' living standards. Further, the key driver of unequal annual labor income growth has been inequalities of *hourly* wages rather than increased inequalities of *work hours*.

The section begins with an examination of the disconnect between pay and productivity; turns to an analysis of wage trends by decile; presents wage gaps by gender and race and ethnicity; demonstrates that sluggish wage growth has not been driven by nonwage benefits such as employer-provided health insurance and pensions; and concludes by showing that the fruits of productivity growth have mainly accrued to those at the top.

Disconnect between pay and productivity

Figure A sets the scene for the rest of the section, showing the growing gap between economy-wide productivity (a measure of how much economic output is produced *on average* in each hour of work) versus real hourly compensation (wages and benefits, adjusted for inflation) for production and nonsupervisory workers (a group that constitutes roughly 80 percent of the private-sector workforce).

Productivity and these workers' hourly compensation grew in tandem roughly from 1948 until the mid-1970s. After 1979, however, productivity growth continued to rise consistently (if at a slower rate than in the previous period). But the typical worker's compensation began lagging further and further behind. In fact, between 1979 and 2013, productivity grew 64.9 percent, while hourly compensation grew only 8.2 percent. Productivity thus grew nearly eight times faster than hourly compensation.

Wage trends by decile

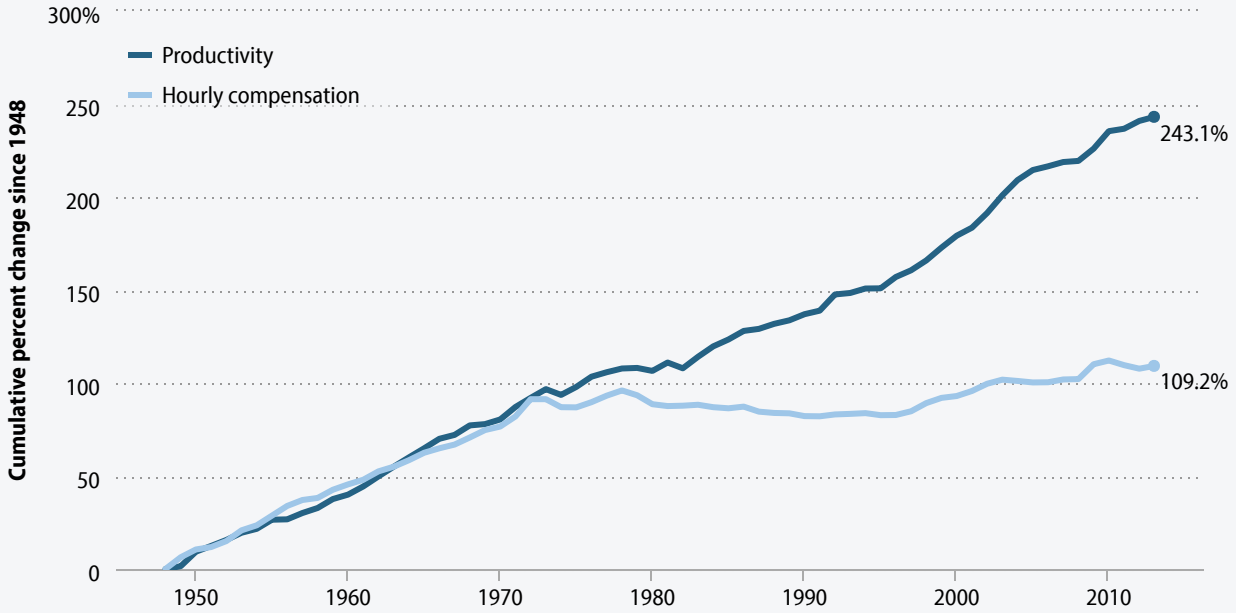
Table 1 presents trends in wage growth at different points of the wage distribution and sheds light on some of the patterns of hourly wage inequality that have characterized recent decades.[2]

Probably the most illustrative measure contained in Table 1 is the hourly wage of the median worker. This is simply the worker at the 50th percentile of the wage distribution, who makes higher hourly wages than half of the American workforce and lower hourly wages than the other half. The overall real median wage has risen just 6.1 percent cumulatively over the past 34 years, compared with economy-wide productivity growth of just under 65 percent. In essence, more than 90 percent of the economy's productivity growth in the past generation has leaked away from the wages of median workers.

Table 1 also provides data on wage trends for workers at each decile (every tenth percentile) in the wage distribution, thus allowing an examination of wage growth (or decline) of low-, middle-, and high-wage earners. Data are also presented for the 95th percentile, the highest wage percentile that can be reliably measured with the Current Population Survey (CPS), the data source for this table. These data are "top coded" for purposes of privacy, meaning that wage val-

FIGURE A VIEW INTERACTIVE *on epi.org*

Disconnect between productivity and typical worker compensation,* 1948–2013



Note: From 1948 to 1979, productivity rose 108.1 percent, and hourly compensation increased 93.4 percent. From 1979 to 2013, productivity rose 64.9 percent, and hourly compensation rose 8.2 percent.

* Data are for compensation of production/nonsupervisory workers in the private sector and net productivity (growth of output of goods and services less depreciation per hour worked) of the total economy. Hourly compensation is derived from inflating the average wages of production/nonsupervisory workers from the BLS Current Employment Statistics (CES) by a compensation-to-wage ratio. The compensation-to-wage ratio is calculated by dividing the average total compensation (wages and salaries plus benefits) by the average wage and salary accruals of all full- and part-time employees from the Bureau of Economic Analysis (BEA) National Income and Product Accounts (NIPA) interactive tables. The 2013 compensation-to-wage ratio used in the calculation of hourly compensation was estimated using the growth rate of the compensation-to-wage ratio from 2012 to 2013 from the Bureau of Labor Statistics (BLS) Employer Costs for Employee Compensation (ECEC).

Source: Authors' analysis of data from BLS Labor Productivity and Costs program, Bureau of Labor Statistics Current Employment Statistics public data series and Employer Costs for Employee Compensation, and Bureau of Economic Analysis National Income and Product Accounts (Tables 2.3.4, 6.2, 6.3, 6.9, 6.10, and 6.11)

UPDATED FROM: Figure 4U in *The State of Working America, 12th Edition*, an Economic Policy Institute book published by Cornell University Press in 2012

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ues above a certain threshold are not reported at the actual value provided to the Census Bureau, but at a specified top wage (roughly 3 percent of workers in the CPS are assigned a top-coded wage). As we will see later, because so much of overall growth has accrued to the very top (even the top 1 percent) of the distribution, this top coding, along with small sample sizes and wide variation in wages at the top, impedes a full understanding of what is happening in the American economy. Even so, the data in Table 1 provide a strong inkling of what is occurring.

TABLE 1

Hourly wages of all workers, by wage percentile, 1979–2013 (2013 dollars)

	Wage by percentile*									
Year	**10**	**20**	**30**	**40**	**50**	**60**	**70**	**80**	**90**	**95**
Real hourly wage										
1979	$8.84	$10.08	$11.83	$13.92	$15.75	$18.26	$21.58	$25.15	$30.76	$37.56
1989	7.55	9.40	11.27	13.47	15.65	18.28	21.75	26.00	32.85	40.37
1995	7.68	9.39	11.22	13.20	15.37	18.19	21.68	26.25	33.92	42.54
2000	8.53	10.51	12.27	14.19	16.56	19.59	23.23	28.22	36.88	47.04
2007	8.75	10.62	12.39	14.54	16.98	20.15	23.92	29.51	39.58	51.14
2013	8.37	9.99	11.94	14.19	16.70	19.75	23.88	29.81	40.44	52.80
Annualized percent change										
1979–1995	-0.9%	-0.4%	-0.3%	-0.3%	-0.2%	0.0%	0.0%	0.3%	0.6%	0.8%
1995–2000	2.1	2.3	1.8	1.5	1.5	1.5	1.4	1.5	1.7	2.0
2000–2013	-0.1	-0.4	-0.2	0.0	0.1	0.1	0.2	0.4	0.7	0.9
1979–2013	-0.2	0.0	0.0	0.1	0.2	0.2	0.3	0.5	0.8	1.0

* The xth-percentile wage is the wage at which x% of wage earners earn less and (100-x)% earn more.

Source: Authors' analysis of Current Population Survey Outgoing Rotation Group microdata

UPDATED FROM: Table 4.6 in *The State of Working America, 12th Edition*, an Economic Policy Institute book published by Cornell University Press in 2012

The data are presented for the business cycle peak years of 1979, 1989, 2000, and 2007, as well as for 1995 (the point during the 1990s business cycle after which wages grew dramatically) and for 2013 (the last year for which data are available).

The bottom panel displays the annualized percent change in wages over select time periods. In broad terms, it shows either flat or falling wages for the vast majority of workers between 1979 and 1995, fast wage growth between 1995 and 2000, and a return to essentially flat or falling wages since 2000. The bottom row presents the annualized percent change in wages over the entire 1979–2013 period.

From 1979 to 1995, for the vast majority of workers, wages either outright fell (for the bottom 50 percent) or were essentially flat (up to the 70th percentile). Even higher-wage earners saw extraordinarily modest hourly wage growth over that same time, rising just 0.3 percent annually at the 80th percentile. Wage growth at the 90th and 95th percentiles, however, was more than double that at the 80th percentile from 1979 to 1995.

Over the entire period between 1979 and 1995, wage growth was faster at higher wages than at lower wages—the higher the percentile in the wage distribution, the faster the wage growth. However, starting in the late 1980s, low-wage workers began experiencing wage growth either comparable to or even exceeding that of middle-wage workers. Consequently, the wage gap between the middle and bottom lessened and then stabilized (data on this are presented later in Table 9 and discussed in some detail in section five). Increases in the minimum wage in the early and late 1990s, along with low unemployment, can explain most of the closing of this gap between the bottom and the middle.

The period between 1995 and 2000 saw a significant and welcome reversal of the poor wage trends over the previous 16 years. Wages grew by at least 1.4 percent annually for every wage decile, and wage growth was actually fastest for the bottom 40 percent (buoyed, again, by a minimum-wage increase in the late 1990s). As we note later, this period of rapid, across-the-board wage growth in the late 1990s should be much more influential in policymaking debates than it has been. Besides the welcome increases in the federal minimum wage, the rapid wage growth was also driven by the very tight labor markets of the late 1990s. This gave American workers up and down the wage distribution some bargaining power vis-à-vis their employers for the first time in a generation.

After the momentum of the late 1990s/early 2000s full-employment labor market was broken by the recession and jobless recovery of the early 2000s, the poor and unequal pre-1995 wage trends reasserted themselves. Wages of the bottom 30 percent of wage earners fell between 2000 and 2013, while wages of workers between the 40th and 70th percentiles were essentially stagnant (growing 0.2 percent annually or less). Only the 95th percentile saw wage growth that even closely approached 1 percent annually. If we look just at wage trends since 2002, after the momentum from the wage growth of the late 1990s had faded, wages have been falling for the bottom 70 percent—by as much as 0.6 percent annually for the bottom 30 percent (see appendix tables and Mishel and Shierholz 2013).

Driven by the long periods of wage troubles (1979–1995 and 2000–2013) for the vast majority, during the entire 1979–2013 span, average annual wage growth steadily increases as one moves up the wage distribution. The changes range from a 0.2 percent decline for the 10th percentile wage, to growth of 0.2 percent for the median wage, and up to a 0.8 percent rise for the 90th percentile wage and a 1 percent gain at the 95th percentile wage. While these data clearly show the top pulling apart from the rest, the largest wage gains are actually concentrated *within* the top 5 percent of wage earners, which as explained previously are not captured by the CPS data (though we do manage to obtain some data that can track trends among the very highest wage earners, which we display in Figure F to come).

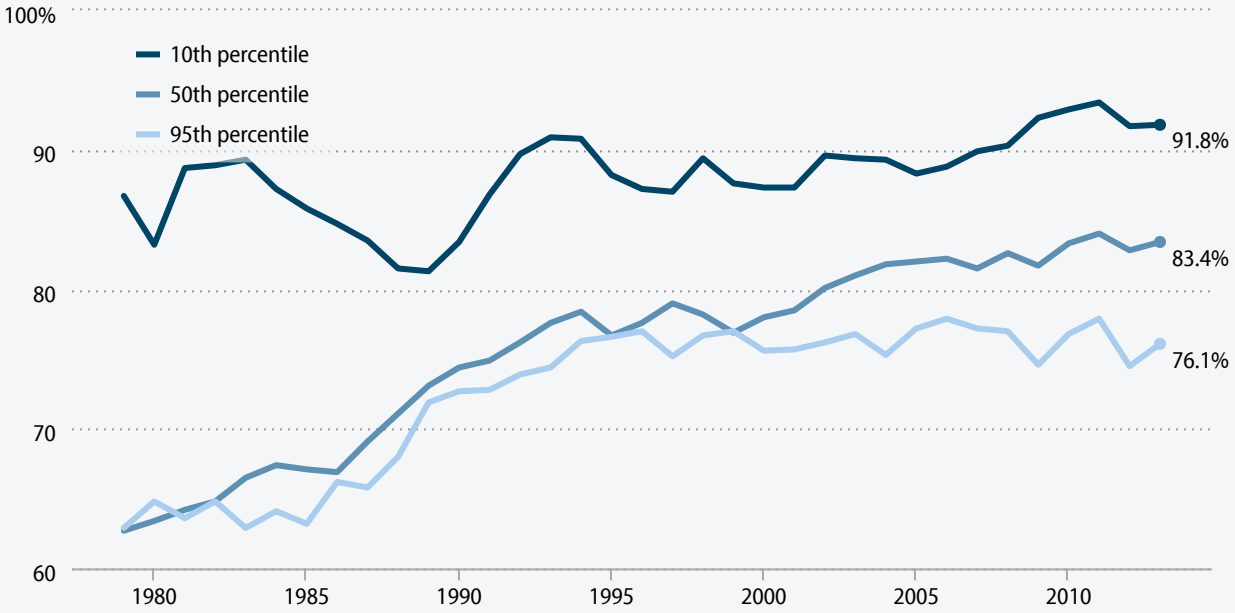
Wage gaps by gender, race, and ethnicity

Just as average wage trends mask variations at different parts within the wage distribution, overall wage trends also obscure different outcomes for men and women as well as for workers of different racial and ethnic backgrounds. The data appendix displays a full complement of data at each decile and the 95th percentile for male and female workers, as well as for white, black, and Hispanic workers. These data show, for instance, that while the median wage of men in 2013 was higher than that of women ($18.11 versus $15.10), the median wage grew between 1979 and 2013 at an average annual rate of 0.6 percent among women and fell by an average of 0.3 percent annually for men.

Figure B displays the ratio of male to female wages at the 10th, 50th, and 95th percentiles of each distribution between 1979 and 2013. For example, the 10th percentile hourly wage in 2013 for women was $8.09 and for men was $8.82. The ratio of these wages was 91.8 percent, meaning that women at the 10th percentile of the women's wage distribution earned 91.8 percent as much as men at the 10th percentile of the men's distribution. These are raw wage comparisons that do not account for differences in factors such as age, education, experience, and occupation. These wage *ratios* could, of course, also be examined as wage *gaps*. For example, a wage ratio of 76.1 percent at the 95th percentile corresponds to a 23.9 percent wage *gap* between male and female wages, meaning that women at the 95th percentile of the female wage distribution make 23.9 percent less than men at the 95th percentile of the male wage distribution.

FIGURE B VIEW INTERACTIVE *on epi.org*

Hourly wages of women as a percent of men's hourly wages, at the 10th, 50th, and 95th wage percentiles, 1979–2013



Note: The xth-percentile wage is the wage at which x% of wage earners earn less and (100-x)% earn more.

Source: Authors' analysis of Current Population Survey Outgoing Rotation Group microdata

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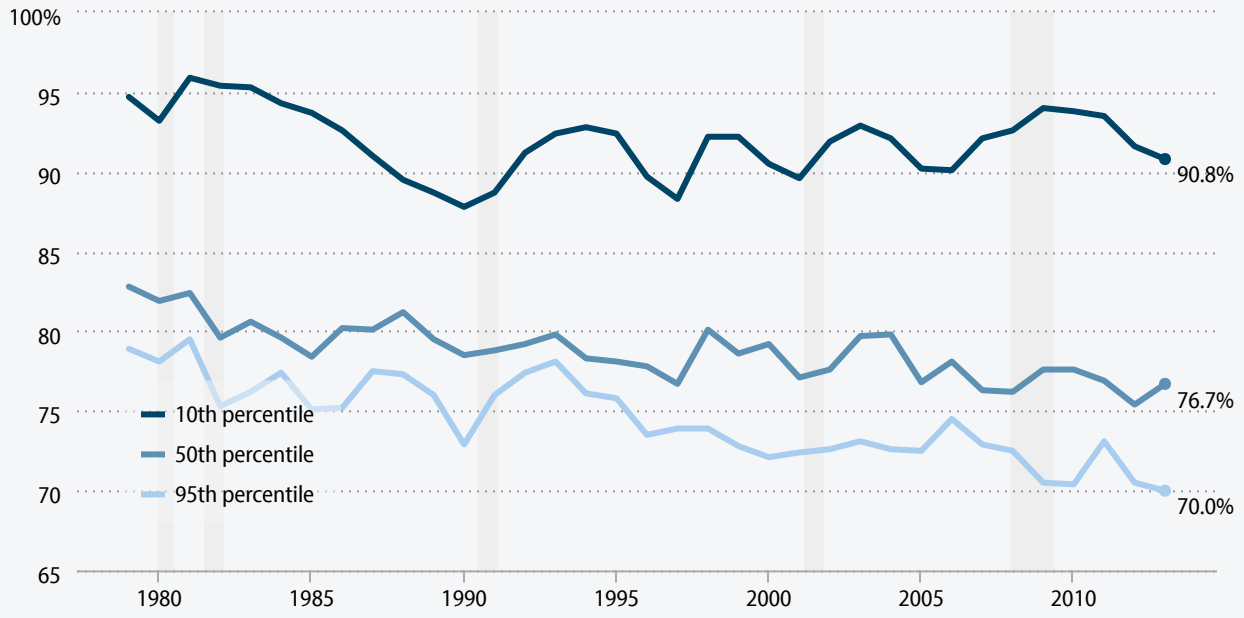
As is clear from Figure B, women's wages at the 10th, 50th, and 95th percentiles are always lower than men's wages at these points in their distribution. The greatest progress in terms of gender wage parity between 1979 and 2013 has been achieved among lower-wage earners. And again, a key driver of progress was likely increases in the federal minimum wage; because low-wage earners are disproportionately female, a rising wage floor helped lift women's wages closer to men's at the bottom of the wage distribution.

Figure B also indicates that the hourly wage gap between men and women increases as one ascends the wage scale: The median wage gap is larger than the 10th percentile gap, and the 95th percentile gap is larger than the median wage gap. In fact, as the median wage gap continued to narrow throughout the 2000s, the 95th percentile wage gap has remained relatively flat for nearly the last 20 years, with a ratio of women's to men's hourly wages of about 76 percent. In 2013, the ratios at the 10th percentile and at the median were far higher, at 91.8 percent and 83.4 percent, respectively.

Figures C1 and **C2** turn to wage ratios by race and ethnicity. They display the hourly wages of black and Hispanic workers as a percent of white hourly wages at the 10th, 50th, and 95th percentiles of each wage distribution. More comprehensive hourly wage data by race and ethnicity can be found in the appendix tables. As with comparing women to men, the wages of black and Hispanic workers at each point in the distribution are lower than those of white workers. The gap again increases as one moves up the wage scale.[3]

FIGURE C-1 VIEW INTERACTIVE *on epi.org*

Hourly wages of black workers as a percent of white hourly wages, at the 10th, 50th, and 95th wage percentiles, 1979–2013



Note: The xth-percentile wage is the wage at which x% of wage earners earn less and (100-x)% earn more. Shaded areas denote recessions. Race/ethnicity categories are mutually exclusive (i.e., white non-Hispanic, black non-Hispanic, and Hispanic any race).

Source: Authors' analysis of Current Population Survey Outgoing Rotation Group microdata

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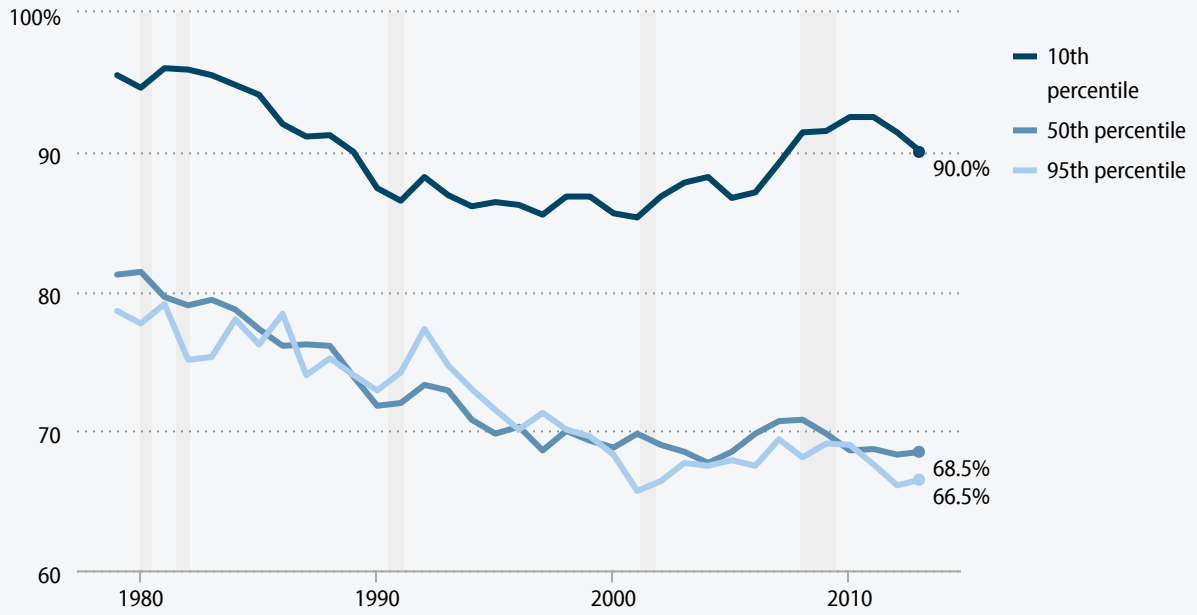
A simple look at the flat or downwardly sloping lines suggests that there has been little to no long-term progress (and even some regress) in closing these wage gaps over the last three-and-a-half decades. Arguably, the gaps at the 10th percentile have been relatively flat, while the gaps at the 95th percentile have been unambiguously rising (i.e., the ratio of black and Hispanic wages relative to white wages has been falling). At the median the black–white wage gap is steadier over time, while the Hispanic–white wage gap rose more sharply.[4] It is clear from looking at these raw, unadjusted hourly wages that the wages of black and Hispanic workers have not closed the gap vis-à-vis white workers' wages as rapidly as women's wages have converged with men's wages since 1979.

Finally, the data underlying these figures can shed light on one claim often made to excuse poor overall wage trends: that these trends simply are driven by an increasing share of nonwhite workers (particularly Hispanic immigrants) in the workforce, which mechanically reduces overall wages (sometimes called a compositional effect). What these data show is that wage growth was slow for all race and ethnic groups; even wages of middle-wage white workers increased just 0.3 percent annually between 1979 and 2013, less than one-third the annual increase of the 95th percentile overall hourly wage.

FIGURE C-2 VIEW INTERACTIVE *on epi.org*

Hourly wages of Hispanic workers as a percent of white hourly wages, at the 10th, 50th, and 95th wage percentiles, 1979–2013



Note: The xth-percentile wage is the wage at which x% of wage earners earn less and (100-x)% earn more. Shaded areas denote recessions. Race/ethnicity categories are mutually exclusive (i.e., white non-Hispanic, black non-Hispanic, and Hispanic any race).

Source: Authors' analysis of Current Population Survey Outgoing Rotation Group microdata

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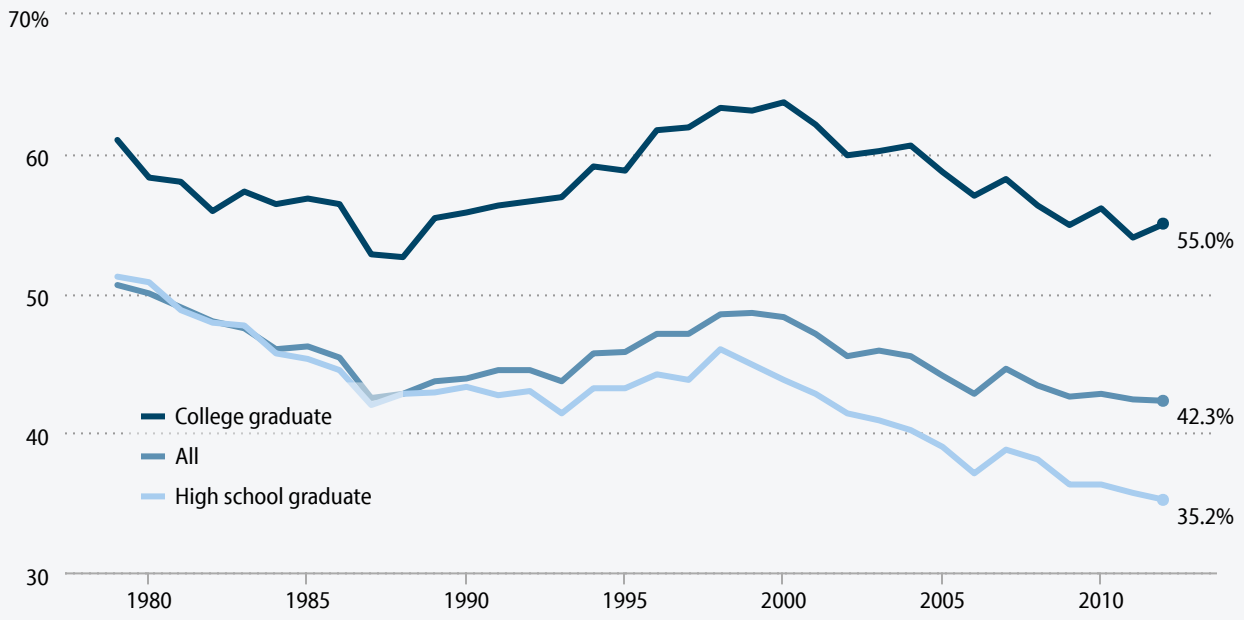
Sluggish wage growth has not been driven by nonwage benefits

The hourly wage data obtained from the CPS microdata do not measure employer-provided benefits. Some have suggested that overall compensation (including both health and pension benefits along with wages) may have risen significantly faster than wages alone in recent decades, particularly due to the rapidly increasing cost of health care, which is often reflected in premiums paid by employers for their workers' health insurance. This section examines whether or not rising benefits make up for (or can explain) the failure of wages to rise for the vast majority.

First, we should note that Figure A illustrated the clear disconnect between productivity and *compensation*, not simply wages, of the typical worker.[5] Furthermore, it is important to note that the share of the workforce covered by employer-provided fringe benefits, such as pensions and health insurance, has actually been falling for over a decade and for much of the last three decades. Therefore, an examination of benefit trends indicates an additional set of concerns regarding job quality and the erosion of pay for many workers. **Figures D** and **E** examine changes in employer-provided pension and health insurance coverage, respectively, between 1979 and 2012. As Figure D shows, pension coverage eroded among private-sector workers from 1979 until 1993, increased through the late 1990s, and began falling again in 2000. Over the entire period, employer-provided pension coverage fell 8.3 percentage points, from 50.6 percent to 42.3 percent. As with wages, the benefits of workers differ by educational attainment. In 2012, college graduates had pensions

FIGURE D VIEW INTERACTIVE *on epi.org*

Share of private-sector workers with employer-provided pension coverage, by educational attainment, 1979–2012



Note: Sample is of private-sector wage-and-salary earners age 18–64 who worked at least 20 hours per week and 26 weeks per year.

Source: Authors' analysis of Current Population Survey Annual Social and Economic Supplement microdata

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at one-and-a-half times the rate of high school graduates, 55.0 percent versus 35.2 percent. It is also clear that college graduates were driving the increases in overall pension coverage in the 1990s.

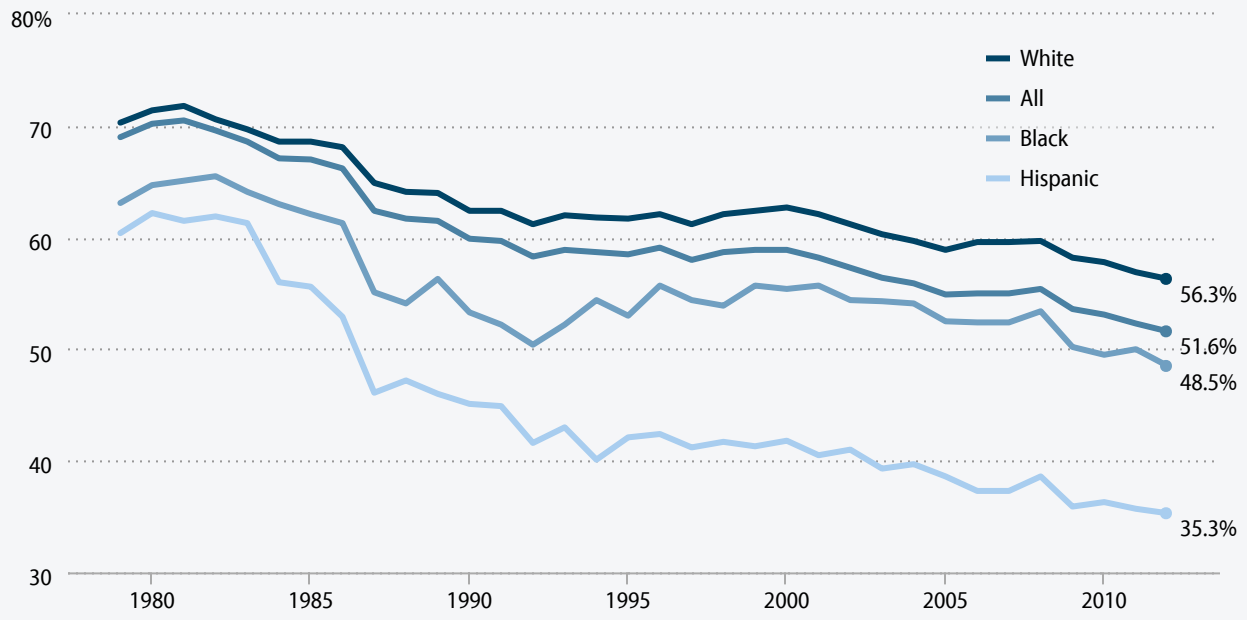
Figure E illustrates the nearly uninterrupted decline in employer-provided health insurance among private-sector workers from 1979 to 2012. Overall coverage rates fell a total of 17.4 percentage points, from 69.0 percent to 51.6 percent. The figure also highlights disparities in benefits by race and ethnicity. In 2013, non-Hispanic whites had coverage rates 7.8 percentage points higher than blacks and 21.1 percentage points higher than Hispanics.

This decline in the incidence of key employer-provided benefits gives important clues as to why the growth in nonwage compensation cannot come near to accounting for the overall divergence between pay for the vast majority and economy-wide productivity. **Table 2** presents a breakdown of the growth in nonwage compensation, or benefits, using the Bureau of Labor Statistics Employer Costs for Employee Compensation data. These data (based on a survey of employers) show that the value of total nonwage compensation, including payroll taxes and both health and pension benefits, grew just $0.27 between 1987 and 2013 (from $5.61 to $5.88).[6] This growth in benefits amounts to roughly a penny a year and certainly does not compensate for or explain the wage losses among American workers.

Simply put, spending on benefits and overall benefit provision are not mitigating the lack of significant wage gains in the middle and bottom of the wage distribution.

FIGURE E VIEW INTERACTIVE *on epi.org*

Share of private-sector workers with employer-provided health insurance, by race and ethnicity, 1979–2012



Note: Race/ethnicity categories are mutually exclusive (i.e., white non-Hispanic, black non-Hispanic, and Hispanic any race). Sample is of private-sector wage-and-salary earners age 18–64 who worked at least 20 hours per week and 26 weeks per year. Coverage is defined as being included in an employer-provided plan for which the employer paid for at least some of the coverage.

Source: Authors' analysis of Current Population Survey Annual Social and Economic Supplement microdata

UPDATED FROM: Figure 4I in *The State of Working America, 12th Edition*, an Economic Policy Institute book published by Cornell University Press in 2012

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Where did the productivity growth go? To the top

We will end here by beginning to answer a question that is more fully addressed in the next section: Since it did not show up in the paychecks of the vast majority of American workers, just where *did* all of the productivity growth generated in the last generation go? We know from Figure A that the vast majority of workers' pay lagged far behind economy-wide productivity growth. We also know that while workers at the 90th and 95th percentiles saw significantly faster growth than those below them in the wage distribution, even they did not see hourly wage growth exceed 1 percent per year for most of the post-1979 period. This begs the question: Where did the rest of that productivity growth go?

One simple answer (and one that will become a common theme throughout this report) is that lots of it accrued to those with the very highest wages—i.e., above the 95th percentile. These workers' wages are so high that they are not captured in the top-coded CPS data.

Figure F turns to another data source, one that is not top-coded. It shows the growth in real annual wages using Social Security Administration (SSA) data, which allow us to tease out changes *within* the top 5 percent of the wage distribu-

TABLE 2

Growth of specific fringe benefits, 1987–2013 (2013 dollars)

Year*	Voluntary benefits: Pension	Voluntary benefits: Health**	Voluntary benefits: Subtotal	Payroll taxes	Total benefits and nonwage compensation
Hourly benefits					
1987	$0.96	$2.41	$3.36	$2.25	$5.61
1989	0.78	2.50	3.27	2.34	5.61
1995	0.80	2.25	3.05	2.44	5.48
2000	0.81	1.97	2.78	2.29	5.07
2007	0.99	2.43	3.42	2.51	5.93
2013	1.06	2.42	3.48	2.40	5.88
Annual dollar change					
1989–2000	$0.00	-$0.05	-$0.04	-$0.01	-$0.05
1989–1995	0.00	-0.04	-0.04	0.02	-0.02
1995–2000	0.00	-0.06	-0.05	-0.03	-0.08
2000–2007	0.03	0.07	0.09	0.03	0.12
2007–2013	0.01	0.00	0.01	-0.02	-0.01
Annual percent change					
1989–2000	0.4%	-2.1%	-1.5%	-0.2%	-0.9%
1989–1995	0.5	-1.7	-1.2	0.6	-0.4
1995–2000	0.3	-2.6	-1.8	-1.3	-1.6
2000–2007	3.0	3.0	3.0	1.3	2.3
2007–2013	1.2	-0.1	0.3	-0.7	-0.1

* Data are for March.

** Deflated by medical care price index

Source: Authors' analysis of Bureau of Labor Statistics Employer Costs for Employee Compensation public data series

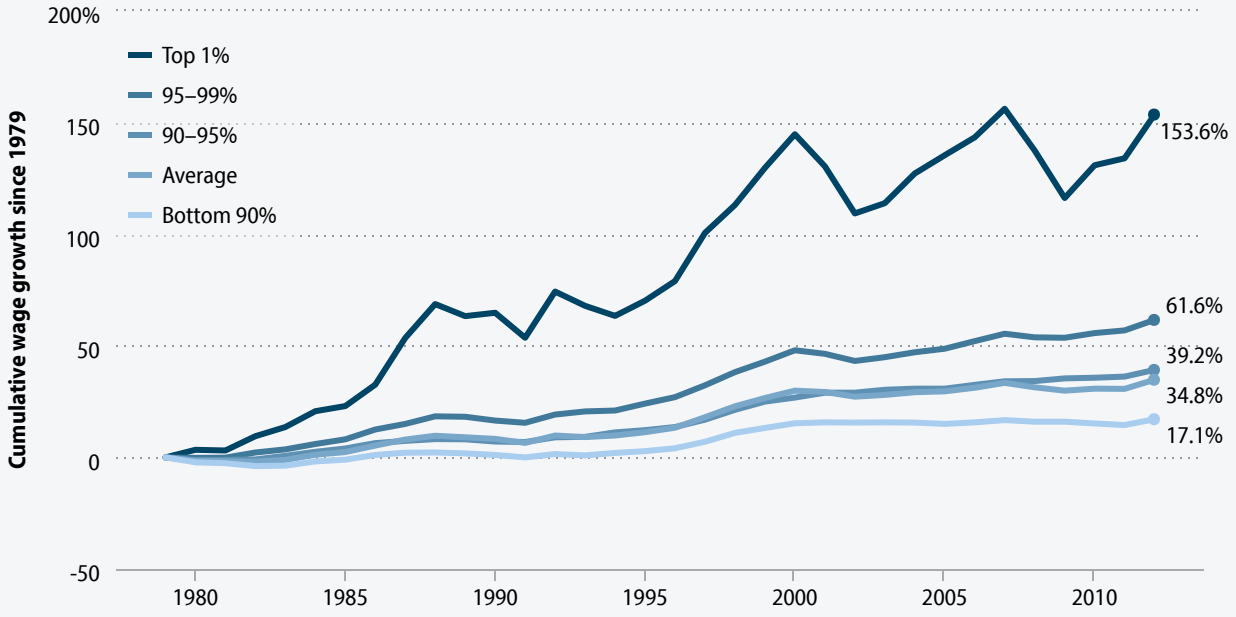
UPDATED FROM: Table 4.9 in *The State of Working America, 12th Edition*, an Economic Policy Institute book published by Cornell University Press in 2012

tion. In Figure F, these data show that real *annual* wages of the bottom 90 percent cumulatively grew 16.7 percent from 1979 to 2007. Including the recent recessionary years, the bottom 90 percent's annual wages grew just 17.1 percent from 1979 to 2012.

In contrast, wages grew 156.2 percent for the top 1 percent of earners between 1979 and 2007, or nearly 10 times as fast as wage growth among the bottom 90 percent over the same period. And even after the fall in top wages during the Great Recession, the top 1 percent saw wage growth of 153.6 percent from 1979 to 2012. The top 0.1 percent of earners (not depicted in the figure) saw growth of 337 percent from 1979 to 2012. In contrast, the group of earners from the 95th to the 99th percentiles saw wages rise roughly in line with economy-wide productivity: 61.6 percent from 1979 to 2012, less than half that of the top 1 percent, but still 3.6 times that of the bottom 90 percent.

FIGURE F VIEW INTERACTIVE *on epi.org*

Cumulative change in real annual wages, by wage group, 1979–2012



Source: Authors' analysis of Kopczuk, Saez, and Song (2010) and Social Security Administration wage statistics

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Only those in the top 10 percent of the wage distribution experienced wage growth that matched or exceeded the average. This extreme skew of wage gains makes clear once again that productivity gains were not broadly shared. The next section draws out the implications of this unequal wage growth for economy-wide inequality and the living standards of low- and moderate-income households in recent decades.

Section Two: Slumping of hourly wage growth for vast majority explains overall trends in income inequality

The previous section primarily reviewed trends in hourly wages for the vast majority of American workers over the past generation. This section undertakes an examination of the interplay between wages and income. Income is at the core of living standards for American families and households; it includes wages as well as returns on investments and/or government transfer payments.

This section begins by providing context for the rise in inequality and the slowdown in middle-class living standards growth that have become such salient issues in American politics. It then documents the degree to which income inequality has risen in recent decades and illustrates how the disappointing wage trends presented previously can explain the large majority of this rise in inequality. It then shows that these hourly wage trends also fully explain the dramatic slowdown in living standards growth for the vast majority of American households over the last generation—a phenomenon sometimes referred to as the "middle-class squeeze." Next, the section explains how the rapid increase in inequality is the dominant explanation for why income growth for the vast majority since 1979 lags so far behind income growth

in the preceding generation. It concludes by illustrating that hourly wage growth has made a modest contribution to middle-class income growth in recent decades.

Background: Inequality and the great slowdown of middle-class living standards growth

To put this slowdown in living standards growth into some perspective, you may recall that a 2012 paper by economist Robert J. Gordon ignited a firestorm of debate that spilled out of academia and onto the pages of the *New York Times* and *Washington Post*. This Gordon paper—titled *Is U.S. Economic Growth Over?*—envisioned a future dystopia where technological advance will have slowed so much that living-standards growth for the vast majority of Americans would be ratcheted down to a terrifyingly low 0.5 percent per year. But between 1979 and 2010, income growth for families between the 20th and 80th percentiles actually averaged 0.6 percent per year. If Gordon's future seemed scary, what was worse was that the broad U.S. middle class had already lived it for decades, thanks to slow hourly wage growth.

Of course, even annual income growth of 0.6 percent leads, over decades, to incomes rising enough to no longer be considered completely stagnant, and, crucially, this income growth for the broad middle class has been noticeably better than the hourly wage growth highlighted in the previous section. Because of this, a revisionist literature has argued that the U.S. economy is actually performing much better for low- and moderate-income Americans than is generally recognized. However, declaring economic performance satisfactory for the broad American middle class rests largely on assuming that any income growth exceeding zero is acceptable.

This is far too low a threshold to be a benchmark of success; even centrally planned economies have managed to post decades of above-zero income growth for their citizens. In this section, we define two more-reasonable benchmarks against which middle-class income growth looks much less impressive. One benchmark is income growth for the broad middle class relative to overall average growth—or the growth that the economy *could have delivered* to all households had they all shared proportionately in these gains (which, it is important to remember, was the case for the first three-plus decades following World War II). Another benchmark is income growth relative to earlier historical epochs. What this benchmark shows is that the rise of inequality—driven by stagnant hourly wage growth—explains the vast majority of the deceleration in middle-class growth relative to earlier periods.

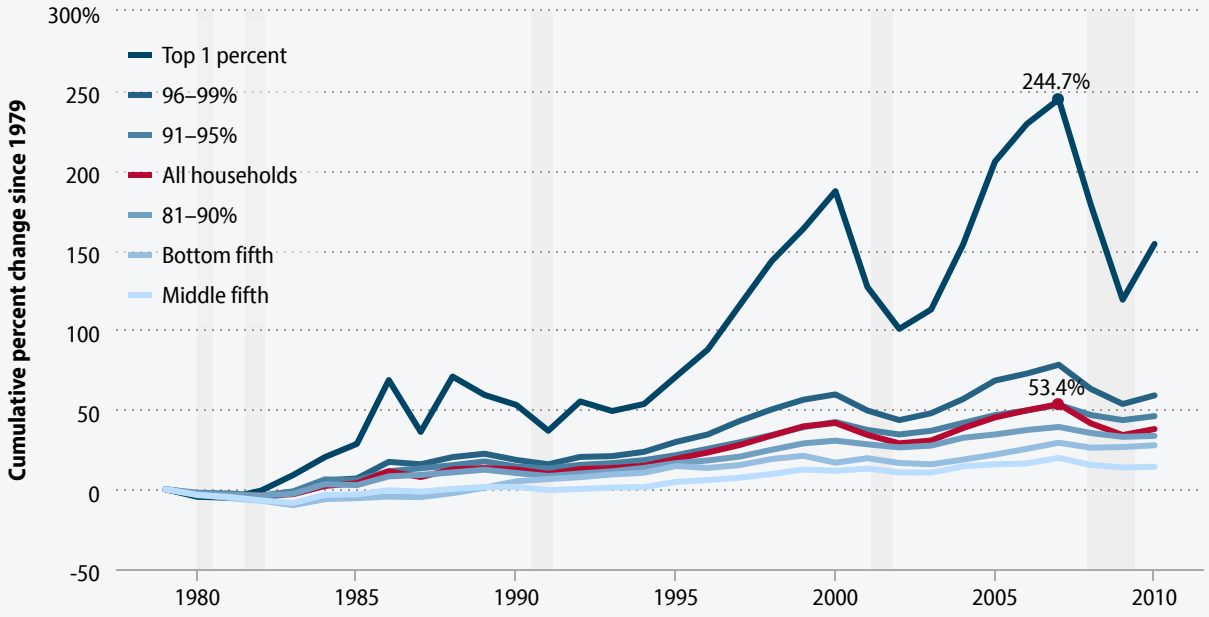
It is undeniably true that *income* growth for most Americans has managed to outpace hourly wage growth, yet it is hard to argue that this signifies an economy working well for these Americans. Further, the *sources* of income growth that allowed it to outpace hourly wage growth will probably operate far less strongly in coming decades. Therefore, ensuring decent income growth in the future will require raising the pace of hourly wage growth for the vast majority. These likely unsustainable sources include (1) households' significant increase in their total hours of work in recent decades, which has helped annual labor income grow even in the face of near-flat hourly wage growth; and (2) government transfers (safety net and social insurance payments) that, combined with an aging population, have boosted incomes significantly for older Americans, which in turn has had a very significant (and positive) effect on overall income trends.

Overall trends in, and sources of, rising income inequality

Figure G shows the increase in American income inequality that has become a matter of intense political concern. It charts the cumulative percentage increase in average incomes for all households (i.e., the overall average); the bottom

FIGURE G VIEW INTERACTIVE *on epi.org*

Change in average real annual household income, by income group, 1979–2010



Note: Data are for comprehensive income. Shaded areas denote recessions.

Source: Authors' analysis of Congressional Budget Office (2013)

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and middle income fifths; households between the 81st and 90th percentiles, 91st and 95th percentiles, and 96th and 99th percentiles; and the top 1 percent. Breaking the top 1 percent down even further would show nearly as dramatic an increase in inequality just within this top group, but it would also stretch the vertical axis so much as to make it nearly unreadable, so for now we will just examine the top 1 percent.

Although the figure depicts trends over 1979–2010, most of this section focuses on the 1979–2007 period, as this span best shows the underlying trends toward greater inequality. This is because income trends between 2007 and 2010 were driven by the Great Recession and the extremely slow recovery. In particular, the stock market decline led to very large reductions in top 1 percent incomes in 2007–2010, as large shares of these incomes are related to asset prices.

Over 1979–2007, the results are striking. Average incomes grew by 53.4 percent. Incomes of the bottom fifth of households grew by 29.2 percent,[7] and incomes of the middle fifth grew just 19.7 percent. Even more strikingly, income growth of households between the 81st and 90th percentiles (39.1 percent) did not come particularly close to matching *overall* average income growth rates, and even average income growth of households between the 91st and 95th percentiles (53.0 percent) fell short of average growth. In short, *over 90 percent of American households saw below-average income growth over 1979–2007*.

Income growth of households between the 96th and 99th percentiles (78.1 percent) significantly exceeded average growth. And income growth of the top 1 percent (244.7 percent) was nearly *five times* as rapid as overall average growth.

The data in Figure G chart comprehensive income—including cash, market-based incomes (wages and salaries, dividends, rent, capital gains, and business income); non-cash income, such as employer contributions to health insurance premiums; and cash and non-cash government transfers like Social Security, food stamps, Medicare, and Medicaid. A substantial revisionist literature in recent years has tried to make the case that these comprehensive income measures rebut the notion that the U.S. economy is performing poorly for the vast majority of American households. We address this debate a bit in a later section, but for now we simply note that the rise in American inequality is extreme even when using these comprehensive income measures. For example, the top 1 percent of households account for a higher share (34.6 percent) of the $38,178 increase in *average* comprehensive income that occurred between 1979 and 2007 than the bottom 80 percent of households (32.3 percent).

What is clearly true, however, is that the rise in inequality is even more extreme when focusing strictly on cash, market-based incomes. Take the now-famous data series compiled by Emmanuel Saez and Thomas Piketty that tracks cash, market-based incomes of tax units. In the Piketty and Saez data, the top 1 percent of tax units account for 84.5 percent of the rise in average income between 1979 and 2012.[8]

Figure H demonstrates the equalizing effects of transfer payments by simply showing the top 1 percent's share of market-based income (with and without capital gains) versus the top 1 percent's share of transfer income in recent decades. The top 1 percent's share of transfer income is actually slightly less than their share of the population (and obviously well under their share of total income) and is steady over the time period. Their share of market-based income starts out many multiples above their share of the population and then roughly doubles in the period before the Great Recession (rising from 9.1 percent to 20.0 percent), before taking a significant fall in 2008 and 2009 and then heading back up in 2010.

Slow wage growth for vast majority drives inequality

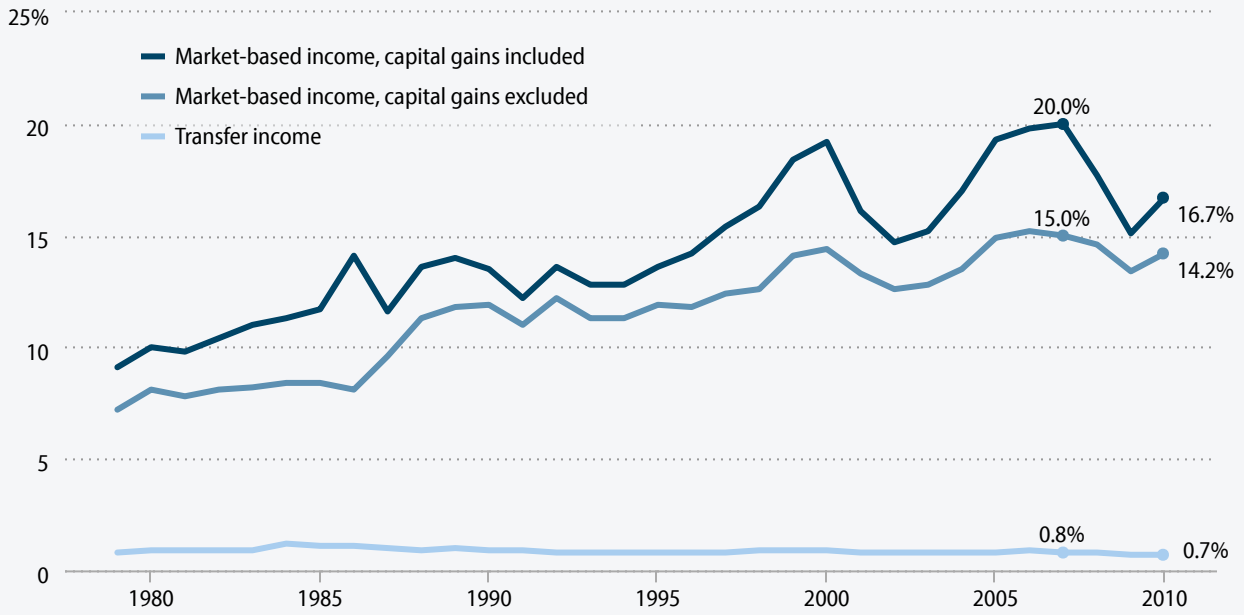
Table 3 provides some more detail on the composition of top 1 percent incomes, how the composition of their income differs from that of overall income, and how changes within and between income categories have contributed to the rise in the top 1 percent's share of overall income. This table helps us to zero in on how stagnant wages for the vast majority are the root of the extraordinary rise in inequality in recent years.

The table's overarching finding is that the rise in the top 1 percent share of overall income is explained both by their claiming an ever-larger share of each of the major types of income (their shares of labor and capital income both grew) and by the share of all income going to capital and business incomes growing significantly. This shift from labor compensation toward capital and business incomes boosts the top 1 percent income share because capital and business incomes accrue disproportionately to the top 1 percent.

The first panel simply shows the top 1 percent income share in various years, both for overall income as well as for the various sources of income identified in CBO (2013). A clear finding is that the top 1 percent share of every source of income except government transfers rose significantly between 1979 and 2007. Particularly salient is that the top 1 percent's share of labor income more than doubled, from 3.9 percent to 8.6 percent; indeed, this is the single largest explanatory factor in this table behind the rise in the top 1 percent's overall income share, explaining nearly a third of the increase by itself.

FIGURE H VIEW INTERACTIVE *on epi.org*

Top 1 percent share of transfer and market-based income, with and without capital gains, 1979–2010



Source: Authors' analysis of Congressional Budget Office (2013)

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The next panel shows the share of top 1 percent income accounted for by each income source. The most striking finding here is the large decline in labor compensation's share of total 1 percent income, falling from 69.8 percent in 1979 to 60.3 percent in 2007. Correspondingly, capital income's overall share (driven mostly by capital gains and business income) rose substantially, from 18.2 percent to 22.8 percent.[9] We have noted elsewhere (Mishel et al. 2012) that the rise in capital income's share is driven overwhelmingly by a higher profit rate, not a rise in capital–output ratios. This means that the higher capital income share is not simply rewarding capital owners for the greater importance of capital in production (as it is not playing a larger role in overall income generation), but is instead driven entirely by an increase in the payment capital owners receive per unit of capital owned. This becomes important in how we assess the causes of the rise in the top 1 percent share.

The next two panels document two sources of the rise in top 1 percent income shares: a rising top 1 percent share (or, *concentration*) *within* each income source, and a shift in overall income shares *between* sources. Growing concentration *within* income sources could boost top 1 percent shares of overall income if, say, the top 1 percent claims an increasing share of both labor and capital incomes. Shifts in income shares between income sources can boost top 1 percent shares of overall income if, for example, there is a shift over time from less-concentrated income sources (such as labor income) to more-concentrated sources (such as capital income).

The third panel calculates how much growing concentration *within* each income category contributed to the increasing top 1 percent share between 1979 and 2007. The concentration *within* income types contributed 7.2 percentage points

TABLE 3

Decomposition of, and changes in, top 1 percent incomes, 1979–2010

			Capital and business incomes					
	Total	Labor compensation	Rents, interest, dividends	Business income	Capital gains	Total	Pensions	Transfers
Top 1% share of each income type								
1979	8.4%	3.9%	25.1%	20.1%	54.6%	33.5%	4.7%	0.8%
2007	18.0%	8.6%	42.1%	48.7%	71.3%	58.7%	6.6%	0.8%
2010	14.5%	8.3%	43.0%	51.9%	79.8%	54.0%	7.5%	0.7%
Share of top 1% income accounted for by each category								
1979	100.0%	69.8%	10.1%	4.5%	3.6%	18.2%	3.2%	8.8%
2007	100.0%	60.3%	8.7%	6.2%	8.0%	22.8%	6.3%	10.7%
2010	100.0%	62.9%	6.5%	6.1%	3.4%	16.0%	7.1%	14.0%
Within contributions*								
1979–2007	7.2	3.0	1.6	1.5	1.0	5.2	0.1	0.0
2007–2010	0.6	-0.2	0.1	0.2	0.5	-0.9	0.1	0.0
Between contributions**								
1979–2007	2.4	-0.6	-0.5	0.6	2.7	2.1	0.2	0.0
2007–2010	-4.1	0.2	-0.9	0.0	-3.5	-3.8	0.1	0.0
Total change								
1979–2007	16.9%	2.5%	1.1%	2.1%	3.7%	7.3%	0.3%	0.0%
2007–2010	-8.2%	0.0%	-0.8%	0.2%	-3.0%	-4.7%	0.1%	0.0%

* Percentage-point contribution of growing concentration within each income category to increasing top 1% income share

** Percentage-point contribution of shift from less- to more-concentrated income categories to increasing top 1% income share

Source: Authors' analysis of Congressional Budget Office (2013)

of the 9.6 percentage-point total increase in the top 1 percent's income share, and 3.0 percentage points of this was concentration within labor income.[10]

The fourth panel calculates how much the shift *between* income categories (from less- to more-concentrated income categories, mostly from labor to capital-like incomes) contributed to the increasing top 1 percent share of overall income over the same period. While the individual components are a bit hard to interpret, the total effect of shifts *between* income categories accounts for 2.4 percentage points of the total 9.6 percentage-point increase in the top 1 percent share between 1979 and 2007.

One way to summarize what these data tell us is that the vast majority of households are losing out in claiming their proportionate share of total income growth in two significant ways. First, workers *as a group* are losing out to capital owners, with the shift from labor to capital income explaining a significant portion of the rise of the top 1 percent.

Second, middle-class households (defined in this instance as the bottom 99 percent) are able to claim only an ever-shrinking portion of the overall wage bill, with the highest-paid workers doubling their share of labor income.

In our view, these are simply two sides of the same coin: a pronounced reduction in the collective and individual bargaining power of ordinary American workers. If wages of the bottom 99 percent had kept pace with productivity growth for most of the past generation (the way they did in the preceding generation), then most of the increase in income inequality we have seen *simply would not have had space to develop*, as concentration within labor incomes would not have grown and the share of total output available to be claimed by capital owners would have been significantly smaller.[11]

The toll of rising inequality on living standards for the vast majority

Inequality fueled by broad wage stagnation is by far the most important determinant of the slowdown in living standards growth over the past generation, and it has been enormously costly for the broad middle class. **Figure I** shows actual income growth of the broad middle class (defined as households between the 20th and 80th percentiles of the income distribution) over the generation before 2007, and growth they could have had if their incomes had simply kept pace with overall average growth (i.e., had inequality not widened over this time). The wedge between these incomes is essentially a tax on middle-class incomes imposed by rising inequality. By 2007, this implicit tax was enormous; middle-class incomes today would be roughly 23.4 percent ($17,890) higher had inequality—driven by stagnant hourly wages—not widened. This comparison makes clear why the revisionist literature on the economic health of the middle class that defines any income growth greater than zero as satisfactory is so far off base. The U.S. economy has generated enormous amounts of income—even in the post-1979 period when overall growth slowed. It can certainly provide far faster growth for the broad middle class than it has over the past generation, and its failure to do so is an economic catastrophe.

Income growth for the vast majority in historical perspective

The rapid increase in inequality that began (roughly) in 1979 has not just kept incomes for the vast majority from growing as fast as the overall average, it also is the dominant explanation for why income growth for the vast majority since 1979 lags so far behind income growth in the preceding generation.

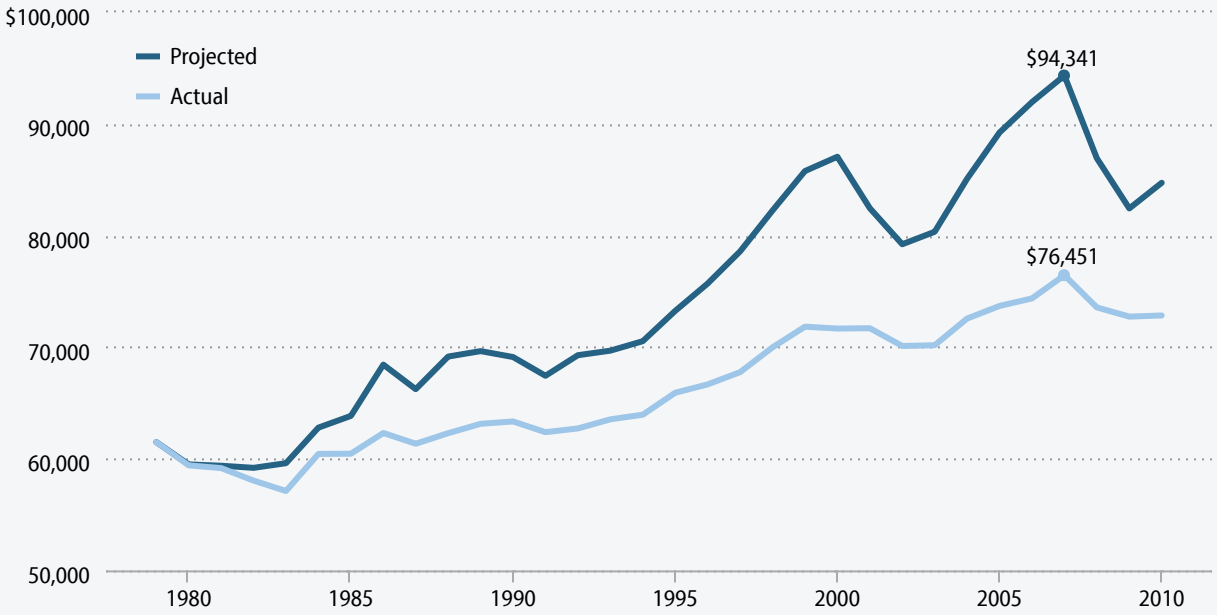
While *average* income growth has indeed slowed in the most recent generation compared with the period between 1947 and 1979, this overall slowdown does not explain the majority of the deceleration of income growth *for the vast majority*. Instead, the rise in inequality is a more important factor.

Figure J provides the evidence. In each block of bars, the left bar shows growth in various income measures from 1947 to 1979, while the center bar shows growth from 1979 to 2007 and the right bar shows growth from 2007 to 2010.

The left-most block of bars shows growth in average, per capita personal income. This grew at an annual rate of 2.6 percent in the earlier period and then slowed to 1.7 percent in the second period. This means that even without the upward redistribution over the past generation, income growth for the vast majority would have slowed simply because average income growth weakened. However, if this were the only reason for slowing middle-class income growth, the American middle class would have had a much more prosperous generation. Instead, the fruits of even this slower average growth largely bypassed the broad middle class.

FIGURE I VIEW INTERACTIVE *on epi.org*

Household income of the broad middle class, actual and projected assuming it grew at overall average rate, 1979–2010



Note: Data show average income of 20th–80th percentile.

Source: Authors' analysis of Congressional Budget Office (2013)

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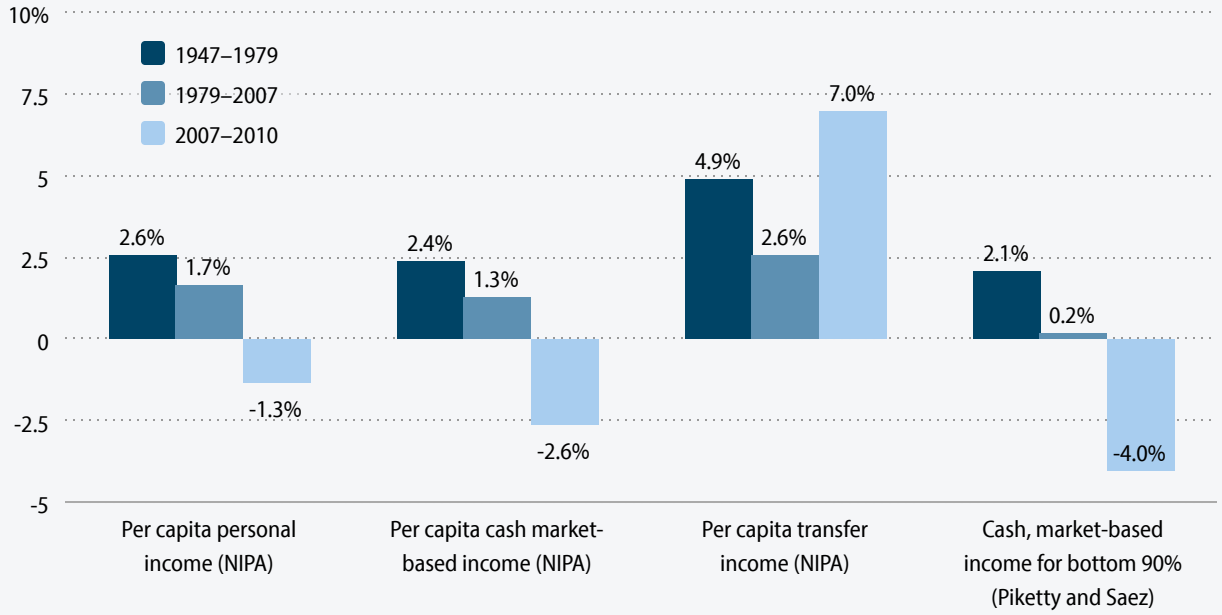
The next cluster of bars shows the growth of cash, market-based income overall. This component of personal income grew by 2.4 percent annually in the first period and 1.3 percent annually in the second.

Moving right, the next cluster of bars shows the contribution of transfers and non-cash market income to the overall growth rate. This component of income grew by 4.9 percent annually in the first period and 2.6 percent annually in the second period. What this shows is the slowdown in market income growth for the vast majority post-1979 was hugely unlikely to have been compensated for by any *increase* in transfer incomes (while transfers continued to grow in the second period, they grew at a slower pace).

Finally, the last block of bars shows the growth of cash, market-based income for the bottom 90 percent in each period, using the Piketty-Saez data series. The upshot is clear: The collapse of growth in cash, market-based incomes for the vast majority of American households has led to a pronounced slowdown in their living standards growth, and it is implausible that this slowdown in cash, market-based income growth was somehow fully made up for by increased growth in transfers and non-cash market incomes. Again, the rising inequality of market-based incomes (fueled by broad wage stagnation) is the single most important reason why living standards growth for the vast majority has decelerated so markedly over the last generation.

FIGURE J VIEW INTERACTIVE *on epi.org*

Average annual growth of various income measures, by time period



Source: Authors' analysis of data from Piketty and Saez (2013, updated) and Bureau of Economic Analysis National Income and Product Accounts (Table 2.1)

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Reliable sources of income growth for the vast majority? Everything but hourly wages

Finally, we review the sources of income growth for the broad middle class since 1979 and show that hourly wage growth made only a meager contribution to income growth over this time. **Table 4** shows the sources of income growth for the broad middle class by income type.

TABLE 4

Change in average comprehensive income for households in the 20th–80th percentile, by income source, 1979–2010 (2013 dollars)

		Labor compensation					Social insurance/safety net		
	Total	Wages and salaries	Employer-sponsored insurance	Total	Capital and business income	Pensions	Cash	Non-cash*	Total
1979	$61,432	$45,349	$2,135	$47,484	$5,826	$2,329	$4,506	$1,287	$5,793
1989	63,133	42,304	2,364	44,667	6,454	4,220	5,388	2,404	7,792
1995	65,900	42,259	3,056	45,316	5,204	5,290	6,138	3,952	10,091
2000	71,715	46,438	2,736	49,174	5,698	6,765	6,063	4,015	10,078
2007	76,474	46,946	3,624	50,569	5,343	7,358	7,003	6,202	13,204
2010	72,820	42,296	3,344	45,640	3,744	7,470	8,875	7,091	15,966
Change									
1979–2007 ($)	$15,042	$1,597	$1,489	$3,085	-$483	$5,028	$2,496	$4,915	$7,411
1979–2007 (% of total change)	100.0%	10.6%	9.9%	20.5%	-3.2%	33.4%	16.6%	32.7%	49.3%

* Includes value of Medicare, Medicaid, food stamps, and other non-cash government transfer payments

Source: Authors' analysis of Congressional Budget Office (2013)

What immediately stands out is the modesty of the contribution made by labor income (which is the sum of wages and salaries plus employer-provided health insurance). Between 1979 and 2007, the growth of labor income ($1,597 in wages and salaries, $1,489 in health benefits) can account for only 20.5 percent of the entire increase ($15,042) in comprehensive income for the broad middle class. It is crucial to remember that in 1979, labor income accounted for 77.3 percent of total household income for the broad middle class, so the fact that it contributed just 20.5 percent of the growth between 1979 and 2007 means that it punched far below its weight. Transfers, on the other hand, can account for essentially half of the income growth over that time period (and non-cash transfers, which are dominated by health programs like Medicare and Medicaid, account for nearly a third of all income growth over that period).

Of course, part of the explanation for this outsized importance of transfers—the bulk of which are directed toward older households—is demographic shifts over this time. **Table 5** carries out the same exercise but excludes households classified as both elderly and childless (in what follows, we will refer to this group as "non-elderly households" for the sake of brevity).[12] This group should skew much more heavily toward those most reliant on their job for income.

TABLE 5

Change in average comprehensive income for households in the 20th–80th percentile, by income source, excluding elderly/childless households, 1979–2010 (2013 dollars)

		Labor compensation					Social insurance/safety net		
	Total	Wages and salaries	Employer-sponsored insurance	Total	Capital and business income	Pensions	Cash	Non-cash*	Total
1979	$64,738	$52,624	$2,468	$55,092	$4,794	$1,655	$2,456	$740	$3,196
1989	67,481	52,777	2,955	55,732	5,162	3,183	2,393	1,011	3,404
1995	70,586	53,014	3,875	56,889	4,510	4,108	2,920	2,160	5,080
2000	76,029	57,606	3,406	61,012	4,917	5,226	2,791	2,083	4,874
2007	80,335	58,410	4,503	62,912	5,002	5,539	3,341	3,542	6,882
2010	76,640	53,749	4,285	58,035	3,755	5,531	4,945	4,374	9,319
Change									
1979–2007 ($)	$15,598	$5,785	$2,035	$7,820	$208	$3,884	$885	$2,801	$3,686
1979–2007 (% of total change)	100.0%	37.1%	13.0%	50.1%	1.3%	24.9%	5.7%	18.0%	23.6%

* Includes value of Medicare, Medicaid, food stamps, and other non-cash government transfer payments

Note: Data are derived from weighted average of non-elderly childless households and households with children.

Source: Authors' analysis of Congressional Budget Office (2013)

For this group of households, labor income makes a much larger contribution to total income growth over the past generation. Labor income rose for this group by $7,820 ($5,785 from wages and salaries and $2,035 from employer-provided health insurance), accounting for 50.1 percent of the $15,598 in total income growth between 1979 and 2007. Of course, this still means that labor income growth seriously underperformed, as labor income accounted for 85.1 percent of total household income for non-elderly households in 1979.

Most importantly, the $7,820 growth in annual labor income seen by non-elderly households in the broad middle class between 1979 and 2007 was driven overwhelmingly by increased hours of work per year instead of growth in hourly pay.

Table 6 shows the growth in hours by working-age households over time, a measure that takes into account changes in the number of workers per household (including a rise in two-earner households) and the increased average annual work time for each earner in the household. By 2007, households in the broad middle class worked an average of 9.2 percent more (or 290 extra hours) per year than in 1979.

As just noted in the discussion of Table 5, annual labor earnings (including employer-provided benefits, which are not tracked in the wage data shown in Table 6) rose by $7,820 between 1979 and 2007 for non-elderly households in the broad middle class. This constituted a 14.2 percent increase in annual earnings, which implies that the 9.2 percent increase in *hours* can explain about two-thirds of the rise in annual labor income over that period (as 9.2 percent is roughly two-thirds of 14.2 percent). Increased hourly compensation thus only accounts for the remaining third. The upshot of this analysis is that rising *hourly* labor earnings can account for just over 17 percent (one-third of the 50.1 percent contribution of annual earnings) of the rise in total broad middle class family incomes—*even for largely working-age households*—between 1979 and 2007.

Finally, it is staggering how much of the $7,820 in labor income growth between 1979 and 2007 was driven by the five years between 1995 and 2000: 52.7 percent. This late 1990s period was, of course, a time when unemployment rates reached their lowest levels in generations. This full-employment boom provided some real bargaining power to workers across the wage distribution that resulted in the only period of broad-based wage growth over the last four decades. Further, the annual wage increases in this period were predominantly driven by increased *hourly* compensation, not simply longer hours. In fact, in the 23 years between 1979 and 2007 that do *not* include the tight labor markets of the late 1990s, annual labor income growth averaged just 0.3 percent for the broad middle class, and hourly compensation actually *declined* slightly.

There are several important lessons to draw from this examination. First, a return to full employment should be much more of a pressing policy priority than it currently is. Second, and most relevant to this project, we simply must find ways to give American workers some genuine bargaining power even in those periods when full employment does not prevail. Think of a worker who began her career in 1979: By 2013 she would have spent only five years out of her 34-year working life in an economy with near full employment. Relying solely on achieving and sustaining full employment as a strategy for boosting wages does not seem like a promising avenue on its own.

As shown in Table 5, the remaining major contributions to total income growth between 1979 and 2007 for non-elderly households in the broad middle class are made by pensions (24.9 percent) and transfers (23.6 percent). It is important to note, however, that pension income growth among this group has slowed rapidly post-2000. Between 2000 and

TABLE 6

Contribution of hours versus hourly wages to annual wage growth for working-age households, by income group, selected years, 1979–2012 (2012 dollars)

							Period changes		
	1979	1989	1995	2000	2007	2012	1979–2007	2007–2012	1995–2000
Real average annual wages									
Second fifth	$33,471	$34,472	$33,377	$37,580	$36,725	$32,693	9.3%	-11.0%	12.6%
Middle fifth	$50,279	$52,800	$51,608	$57,501	$56,710	$52,477	12.0%	-7.5%	11.4%
Fourth fifth	$67,785	$73,463	$74,156	$82,464	$82,902	$78,831	20.1%	-4.9%	11.2%
Average of above	$50,512	$53,578	$53,047	$59,182	$58,779	$54,667	13.8%	-7.8%	11.7%
Annual hours worked									
Second fifth	2,543	2,797	2,811	2,908	2,787	2,663	9.2%	-4.5%	3.5%
Middle fifth	3,007	3,273	3,323	3,395	3,335	3,228	10.3%	-3.2%	2.2%
Fourth fifth	3,424	3,604	3,688	3,774	3,719	3,602	8.3%	-3.1%	2.3%
Average of above	2,991	3,225	3,274	3,359	3,280	3,165	9.2%	-3.5%	2.6%
Implicit household wages per hour worked									
Second fifth	$13.16	$12.32	$11.87	$12.92	$13.18	$12.28	0.1%	-6.8%	8.8%
Middle fifth	$16.72	$16.13	$15.53	$16.94	$17.01	$16.26	1.7%	-4.4%	9.0%
Fourth fifth	$19.80	$20.38	$20.11	$21.85	$22.29	$21.88	11.8%	-1.8%	8.7%
Average of above	$16.56	$16.28	$15.84	$17.24	$17.49	$16.81	5.5%	-3.9%	8.8%
Contributions to annual wage growth									
Hours worked									
Second fifth	-	-	-	-	-	-	99.0%	40.6%	27.4%
Middle fifth	-	-	-	-	-	-	85.9%	42.7%	19.1%
Fourth fifth	-	-	-	-	-	-	41.1%	63.9%	20.8%
Average of above							75.3%	49.1%	22.4%
Hourly wages									
Second fifth	-	-	-	-	-	-	1.0%	62.2%	70.1%
Middle fifth	-	-	-	-	-	-	14.1%	59.2%	79.2%
Fourth fifth	-	-	-	-	-	-	58.9%	37.2%	77.4%
Average of above							24.7%	52.9%	75.6%

Note: Working-age households are those headed by someone under age 65. Percentage changes are approximated by taking the difference of natural logs of wages and hours.

Source: Authors' analysis of Current Population Survey Annual Social and Economic Supplement microdata

2010, for example, average pension income for this group grew only $305, compared with growth of more than $1,500 between 1979 and 1989, and growth of over $2,000 between 1989 and 2000. In short, whatever is driving the ability of market-based pensions to contribute to income growth for the vast majority seems to be losing steam.

The rise in transfers could reflect either a growing (though still quite small) share of households with children headed by somebody over age 65, or an increase in multigenerational households with some member(s) receiving transfers targeted to older recipients (Social Security and/or Medicare). Whatever the cause, the implication remains that transfer income has been a rare and disproportionate source of good news for incomes of the vast majority, and preservation at least (if not outright expansion and deepening) of these incomes should hence be a key policy priority moving forward.

Clearly, the root cause of both rising inequality and the middle-class squeeze is slow hourly wage growth for the vast majority. Following sections will detail how slow hourly wage growth also plays a starring role in eroding progress on many other fronts of economic life, including poverty, asset-building and retirement security, social mobility, and macroeconomic stability.

Section Three: Wage stagnation stalls progress in reducing poverty

Besides leading to a pronounced slowdown in living standards of the broad middle class, the failure of wages to grow for the vast majority is also the leading reason why progress in reducing poverty has stalled over the last three decades. In fact, the more one looks at trends for the bottom fifth of households, the more they look like those for the broad middle class. Workers at the bottom have worked longer hours and become increasingly educated, but their hourly wages have not been buoyed by rising productivity. For those concerned about poverty, the foremost policy priority should be raising wages.

This section begins by explaining how wage-driven inequality has led to a decoupling of economic growth and poverty reduction. It then demonstrates that poverty reduction over the last few decades is due not to wage growth, but to an improved social safety net. The section then illustrates the importance of wages to the living standards of the bottom fifth before examining demographic characteristics of workers earning poverty-level wages. It concludes by showing that inequality dwarfs family structure and demographics as a driver of poverty trends.

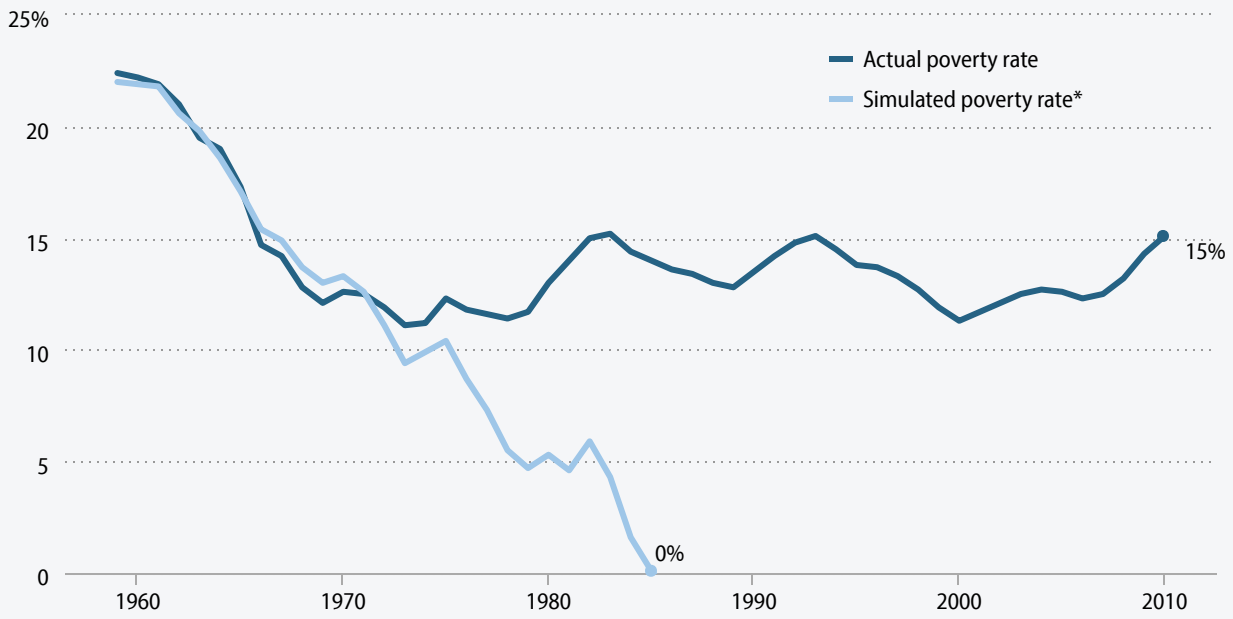
Rising inequality has decoupled economic growth and poverty reduction

Figure K illustrates the stakes by showing how rising inequality (driven by stagnant wages) has delinked economic growth and poverty reduction. Economic growth used to be associated with significant poverty reductions, but since the 1970s the benefits of aggregate growth for lowering poverty have largely stalled. The figure compares the *actual* poverty rate with a *simulated* poverty rate based on a model of the statistical relationship between growth in per capita gross domestic product (GDP) and poverty that prevailed between 1959 and 1973. The model forecasts poverty quite accurately through the mid-1970s. Since then, the *actual* poverty rate stopped falling and has instead fluctuated cyclically within 4 percentage points above its trough in 1973.

However, the simulated poverty rate shows that if the relationship between per capita GDP growth and poverty that prevailed from 1959 to 1973 (wherein poverty dropped as the country, on average, got richer) had held, the poverty rate would have fallen to zero in the mid-1980s. Therefore, broadly shared prosperity could have led to a near eradication of poverty in the United States, but it did not.

FIGURE K VIEW INTERACTIVE *on epi.org*

Poverty rate, actual and simulated,* 1959–2012



* Simulated poverty rate is based on a model of the statistical relationship between growth in per capita GDP and poverty that prevailed between 1959 and 1973.

Source: Authors' analysis of Current Population Survey Annual Social and Economic Supplement Historical Poverty Tables (Tables 2 and 4), Bureau of Economic Analysis National Income Product Accounts (Table 7.1), and Danziger and Gottschalk (1995)

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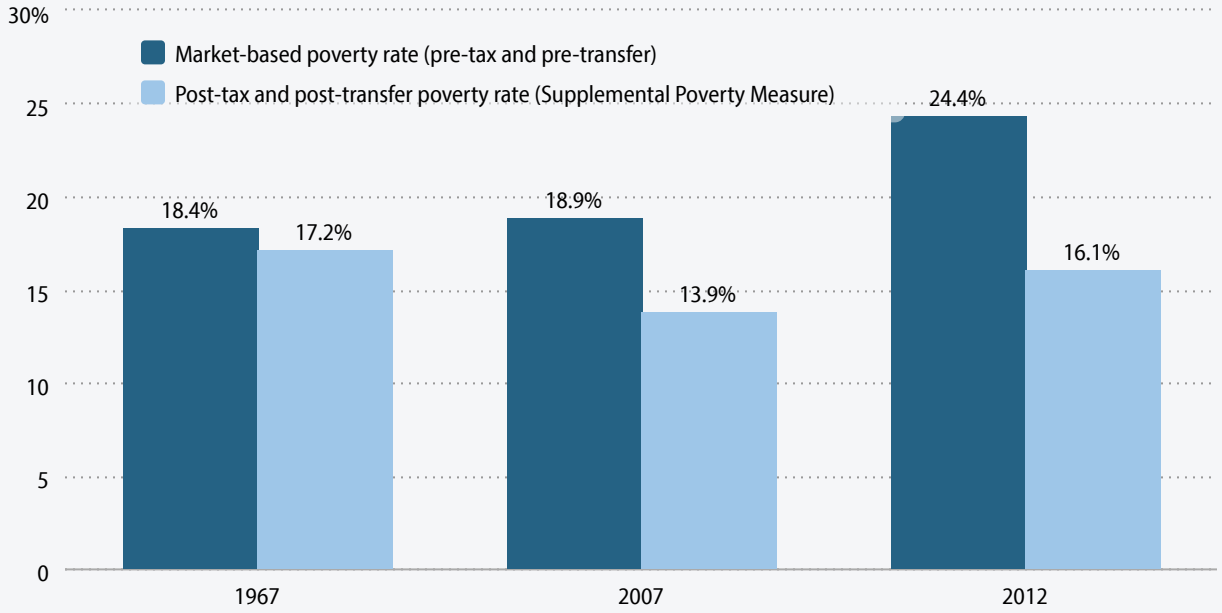
Poverty reductions in recent decades are due to taxes and transfers, not wages

Any progress achieved in reducing poverty since 1967 has been wholly due to an improved social safety net and *in spite of* the deterioration of wages earned by low-income households. This can best be seen using a comprehensive measure of income that incorporates not only market-based incomes (such as wage income) but also government in-kind support (such as Supplemental Nutrition Assistance Program [SNAP] benefits, health care benefits, and housing subsidies), cash transfers (through Temporary Assistance for Needy Families [TANF], Social Security, unemployment benefits, etc.), and tax benefits (e.g., the earned income tax credit [EITC]). A less comprehensive measure, such as the official Census measure, would not show any reduction in poverty as SNAP or earned income tax credits expand, since it does not include those income sources.

Figure L displays both market-based poverty rates (poverty rates if wages were the only source of income and government provided no support) and post-tax, post-transfer poverty rates (poverty rates once government supports have been included) for the non-elderly population (those under age 65).[13] In 1967, market outcomes yielded a non-elderly poverty rate of 18.4 percent, but actual poverty, when counting tax-and-transfer programs, was lower, 17.2 percent, indicating the social safety net reduced poverty by 1.2 percentage points. Forty years later, in 2007, the market produced *greater* poverty (18.9 percent) among the non-elderly population despite the 85.4 percent increase in productivity

FIGURE L VIEW INTERACTIVE *on epi.org*

Non-elderly poverty rates, market-based and post-tax, post-transfer, 1967, 2007, 2012



Source: Authors' analysis of data supplied by Fox et al. (2014)

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since 1967. But in 2007 the safety net lowered the non-elderly poverty rate by a full 5 percentage points, to 13.9 percent. These data indicate, therefore, that the entire improvement (or, more than the entire improvement) in reducing observed non-elderly poverty from 17.2 percent in 1967 to 13.9 percent in 2007 was due to the safety net.

As a result of less work and lower wages in the Great Recession, the market-based non-elderly poverty rate rose to 24.4 percent in 2012, substantially higher than in 1967. Fortunately our safety net programs became stronger in the recession and prevented actual poverty from rising beyond 16.1 percent. Nevertheless, it is remarkable that economic outcomes generated a situation in 2012 where nearly one in four non-elderly households would have been poor if there were no government support, up from 18.4 percent in 1967.

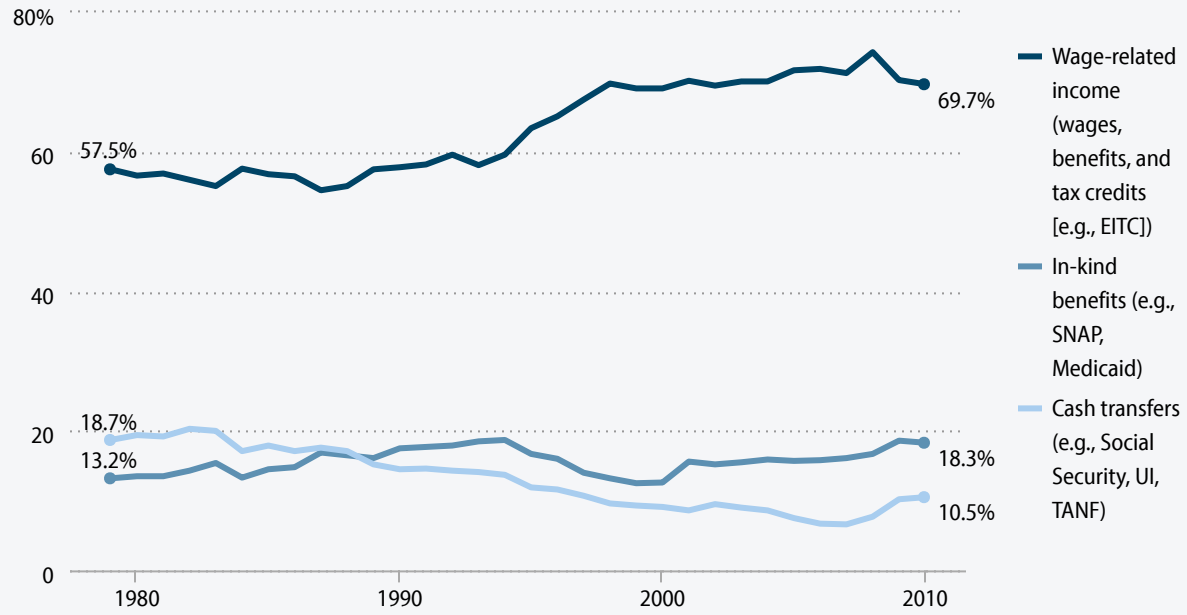
Overall, this figure demonstrates that although the safety net has made some progress toward reducing poverty, the tax-and-transfer system alone is inadequate; wage gains are also necessary. Without hourly wage increases, the tax-and-transfer system needs to work harder and harder simply to keep poverty rates from increasing.

One way the bottom fifth looks middle class: Wages are crucially important

Over the last three-and-a-half decades, wages and wage-related safety-net income (from such sources as the EITC) have grown in importance to low-income households. This is the case because their work hours have increased and government support through cash assistance has diminished as programs such as TANF have become far less generous.

FIGURE M VIEW INTERACTIVE *on epi.org*

Share of income of the non-elderly* bottom fifth accounted for by wage-related income, in-kind income, and cash transfers, 1979–2010



* Data are derived from weighted average of non-elderly childless households and households with children.

Note: Wages and benefits, cash transfers, in-kind income, and tax credits comprise 98.5 percent of all pretax income for the bottom fifth non-elderly population in 2010. The other 1.5 percent is made up of capital gains, proprietors' income, other business income, interest and dividends, and other income.

Source: Authors' analysis of Congressional Budget Office (2013)

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Figure M displays the major sources of income for non-elderly households in the bottom fifth of the income distribution from 1979 to 2010. It shows that incomes of the bottom fifth are increasingly dependent on ties to the workforce. Wages, employer-provided benefits, and tax credits that are dependent on work (such as the EITC) made up 69.7 percent of non-elderly bottom-fifth incomes in 2010, compared with only 57.5 percent in 1979. While government in-kind benefits from sources such as SNAP and Medicaid have increased from 13.2 percent of these bottom-fifth incomes in 1979 to 18.3 percent in 2010, cash transfers such as welfare payments have declined 8.2 percentage points (from 18.7 percent to 10.5 percent). For better or worse, the safety-net system has clearly become increasingly tied to work through programs such as the EITC and the child tax credit, which overwhelmingly benefit households with labor earnings. Consequently, efforts to improve the incomes of low-income households must feature efforts to boost labor earnings.

Efforts to boost living standards for the bottom fifth often focus intensely on the design of public transfers and tax credits. However, while transfers and tax credits are clearly important to families in the bottom fifth, it is crucial to recognize that this group depends on pay from the labor market for the majority of their income. And, as **Table 7**

TABLE 7

Contribution of hours versus hourly wages to annual wage growth for working-age households, by income group, selected years, 1979–2012 (2012 dollars)

							Period changes		
	1979	1989	1995	2000	2007	2012	1979–2007	2007–2012	1995–2000
Real average annual wages									
All	$60,959	$67,222	$71,664	$80,516	$80,399	$78,346	27.7%	-2.6%	11.6%
Bottom fifth	$14,898	$15,163	$14,643	$17,444	$16,849	$14,687	12.3%	-13.7%	17.5%
Annual hours worked									
All	3,092	3,286	3,317	3,378	3,314	3,226	6.9%	-2.7%	1.8%
Bottom fifth	1,716	1,884	1,837	1,977	1,880	1,719	9.2%	-9.0%	7.4%
Implicit household wages per hour worked									
All	$19.72	$20.46	$21.61	$23.83	$24.26	$24.28	20.8%	0.1%	9.8%
Bottom fifth	$8.68	$8.05	$7.97	$8.82	$8.96	$8.54	3.2%	-4.8%	10.1%
Contributions to annual wage growth									
Hours worked									
All	-	-	-	-	-	-	25.0%	103.3%	15.8%
Bottom fifth	-	-	-	-	-	-	74.4%	65.3%	42.2%
Hourly wages									
All	-	-	-	-	-	-	75.0%	-3.3%	84.2%
Bottom fifth	-	-	-	-	-	-	25.6%	34.7%	57.8%

Note: Working-age households are those headed by someone under age 65. Data are for money income. Percentage changes are approximated by taking the difference of natural logs of wages and hours.

Source: Authors' analysis of Current Population Survey Annual Social and Economic Supplement microdata

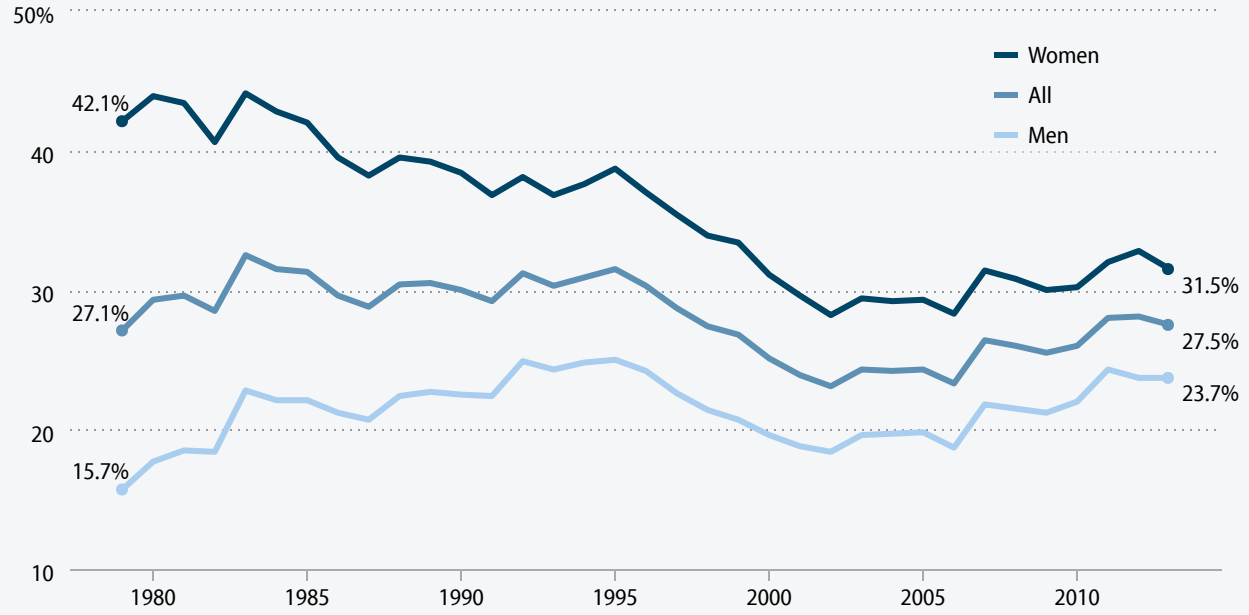
shows, increases in annual wages at the bottom stemmed primarily from increased annual hours worked rather than from increased hourly wages.

Among working-age households, annual earnings in the bottom fifth grew a modest 12.3 percent from 1979 to 2007, rising from $14,898 to $16,849. However, the bulk of the improvement (nearly three-fourths) was due to more work (increased annual hours of work), while only a small part of the improvement (one-fourth) was due to higher earnings per hour worked (rising wage rates). This means there was very little growth in hourly earnings of low-wage workers between 1979 and 2007.

Between 1979 and 2007, annual hours worked by bottom fifth working-age households rose by 165 hours, while (inflation-adjusted) average hourly wages of the bottom fifth rose by $0.28. As noted previously, the late 1990s was the only period of sustained wage growth over the last four decades. Outside of this period, wages were either stagnant or fell for low-wage workers. This can be seen by comparing the actual 1979–2007 outcomes with those that would have

FIGURE N VIEW INTERACTIVE *on epi.org*

Share of workers earning poverty-level wages, by gender, 1979–2013



Note: The poverty-level wage in 2013 was $11.45.

Source: Authors' analysis of Current Population Survey Outgoing Rotation Group microdata

UPDATED FROM: Figure 4E in *The State of Working America, 12th Edition*, an Economic Policy Institute book published by Cornell University Press in 2012

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prevailed had the late 1990s boom not occurred. Without the late 1990s, annual hours of bottom-fifth workers still would have increased, though only by 24 rather than 165 hours. In contrast, hourly wages of the bottom fifth would have actually fallen by $0.57.

In short, over the last three-and-a-half decades, work and work supports have played an increasingly prominent role in incomes for those at the bottom. At the same time, the vast majority of wage increases for this group are due to increasing hours, not rising hourly wages.

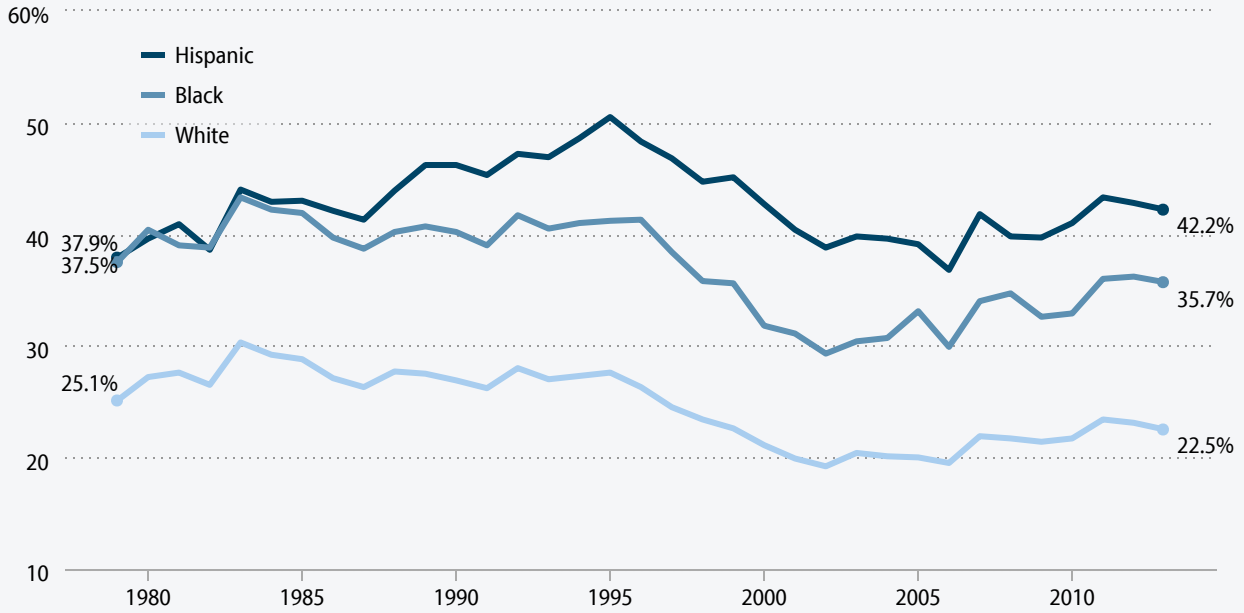
Demographic characteristics of workers earning poverty-level wages

Examining the share of workers earning poverty-level wages allows us to gauge both the health of the low-wage labor market and the prevalence of low earnings. **Figures N** and **O** present, by gender and race and ethnicity, respectively, the share of workers who earn less than $11.45 an hour, the hourly wage that a full-time, year-round worker requires to sustain a family of four at the official poverty threshold. The data cover 1979 through 2013.

As shown in Figure N, more than one-fourth, or 27.5 percent, of workers earned poverty-level wages in 2013, comparable with the 27.1 percent who earned poverty-level wages 34 years earlier in 1979. Furthermore, women are much more likely to earn poverty-level wages than men. In 2013, 31.5 percent of women earned poverty-level wages, significantly

FIGURE O VIEW INTERACTIVE *on epi.org*

Share of workers earning poverty-level wages, by race and ethnicity, 1979–2013



Note: Race/ethnicity categories are mutually exclusive (i.e., white non-Hispanic, black non-Hispanic, and Hispanic any race). The poverty-level wage in 2013 was $11.45.

Source: Authors' analysis of Current Population Survey Outgoing Rotation Group microdata

UPDATED FROM: Figure 4F in *The State of Working America, 12th Edition*, an Economic Policy Institute book published by Cornell University Press in 2012

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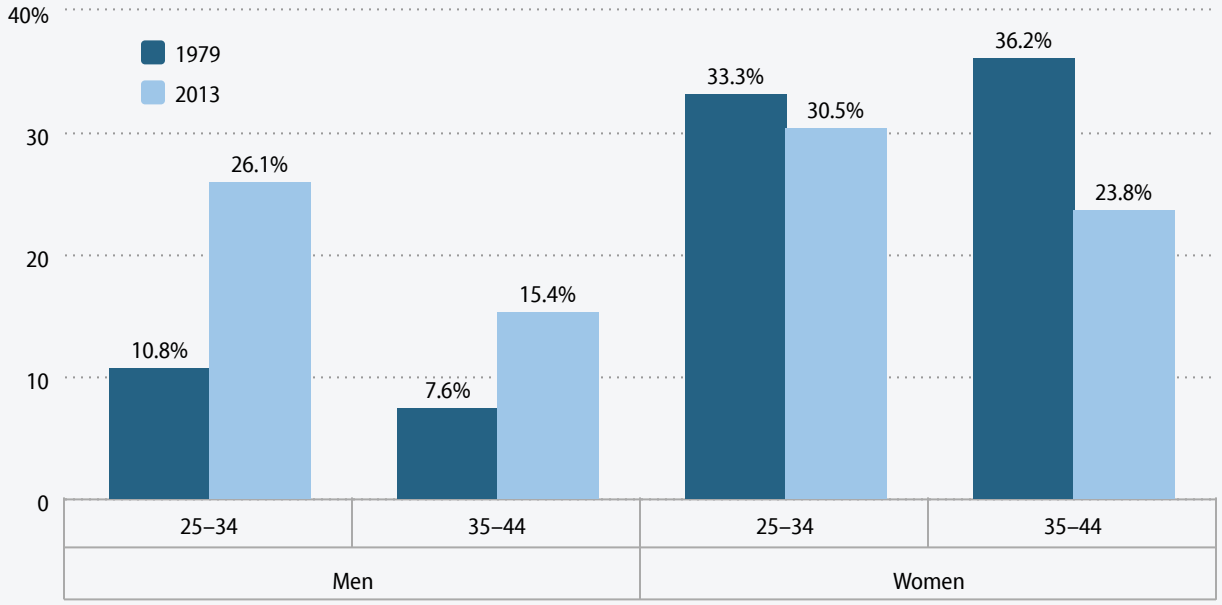
higher than men's 23.7 percent share. However, the situation in 2013 represented some significant progress for women because 42.1 percent earned poverty-level wages in 1979. On the other hand, the share of men earning poverty-level wages grew from 15.7 percent in 1979 to 23.7 percent in 2013.

As shown in Figure O, the share of nonwhite workers earning low wages is substantial. In 2013, 42.2 percent of Hispanic workers and 35.7 percent of black workers earned poverty-level wages, compared with less than one-fourth (22.5 percent) of white workers. There were more black and white workers earning poverty-level wages in 2013 than in 2000. The only period of sustained progress in reducing the extent of poverty-level earnings was, not surprisingly, the late 1990s period of persistent low unemployment and rapid wage growth.

Figure P illustrates the share of male and female workers between 25 and 34 and between 35 and 44 years old who earn poverty-level wages (these are ages when workers are most likely to be independent householders and raising children). Among these age ranges (and in general), women have always been more likely to earn poverty-level wages than men. However, they have seen some improvement over the last three-and-a-half decades, as their rates of poverty-level wages have declined, particularly among those 35–44 years old. On the other hand, men between 25 and 44 have seen precipitous increases in the share working at such low wages. The share more than doubled between 1979 and 2013, with

FIGURE P VIEW INTERACTIVE *on epi.org*

Share of workers earning poverty-level hourly wages, by gender and age group, 1979 and 2013



Note: The poverty-level wage in 2013 was $11.45.

Source: Authors' analysis of Current Population Survey Outgoing Rotation Group microdata

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a particularly stark increase among the younger age group. The bottom line is that there are a great many adults stuck in very low-paying jobs who are also responsible for raising the next generation.

Inequality dwarfs family structure and demographics as a driver of poverty trends

Many would not know it from following elite debates on poverty, but wage-driven income inequality has been a far larger driver of poverty trends since 1979 than many other influences that loom larger in the public debate over poverty.

Table 8 examines a set of factors commonly associated with changes in poverty over the past three-and-a-half decades: changes in the U.S. population's racial composition, education levels, and family structure, and overall income growth and income inequality. The first row shows the percentage-point change in the poverty rate across each subperiod shown, and the subsequent rows show how much (in percentage points) each factor contributed to that change.

In **Figure Q**, we graph how these economic and demographic factors affected the poverty rate between 1979 and 2012 (the latest year for which data are available). Over this period, educational upgrading (workers gaining more education) and overall income growth were the two biggest poverty-reducing factors, while growing income inequality was the largest poverty-increasing factor. If not for increasing income inequality since 1979, the poverty rate would have been 7.4 percentage points lower. In other words, the poverty rate was 7.4 percentage points higher in 2012 than it would have been if the distribution of incomes had not become increasingly unequal since 1979.

TABLE 8

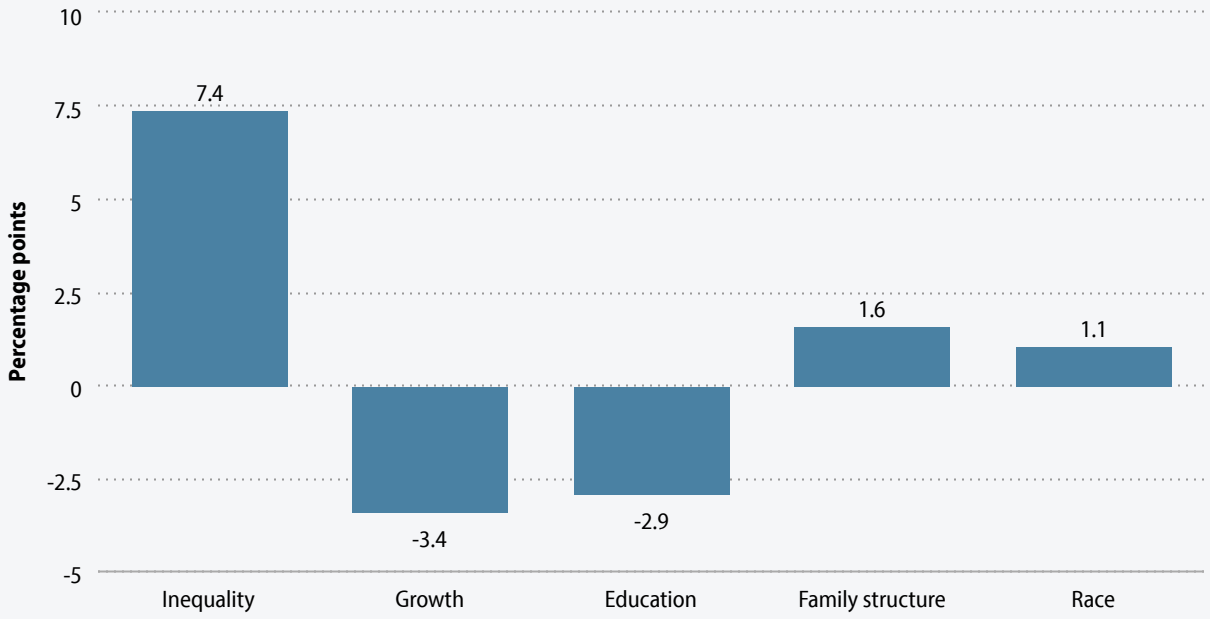
Impact on poverty rate of economic, demographic, and education changes, select periods, 1979–2012 (percentage points)

	1979–1989	1989–2000	2000–2007	1979–2007	2007–2012
Actual change	1.2	-1.5	1.2	0.8	2.5
Total demographic effect	-0.2	-0.6	-0.1	-0.8	0.1
Race	0.4	0.4	0.1	0.9	0.2
Education	-1.2	-1.1	-0.4	-2.7	-0.2
Family structure	0.7	0.4	0.3	1.4	0.2
Interaction	-0.1	-0.2	-0.1	-0.4	-0.1
Economic change	1.4	-0.9	1.2	1.7	2.4
Growth	-1.8	-2.1	0.1	-3.8	0.4
Inequality	3.2	1.2	1.1	5.5	1.9

Source: Authors' analysis of Current Population Survey Annual Social and Economic Supplement microdata based on Danziger and Gottschalk (1995)

FIGURE Q VIEW INTERACTIVE *on epi.org*

Impact on poverty rate of economic, demographic, and education changes, 1979–2012



Source: Authors' analysis of Current Population Survey Annual Social and Economic Supplement microdata based on Danziger and Gottschalk (1995)

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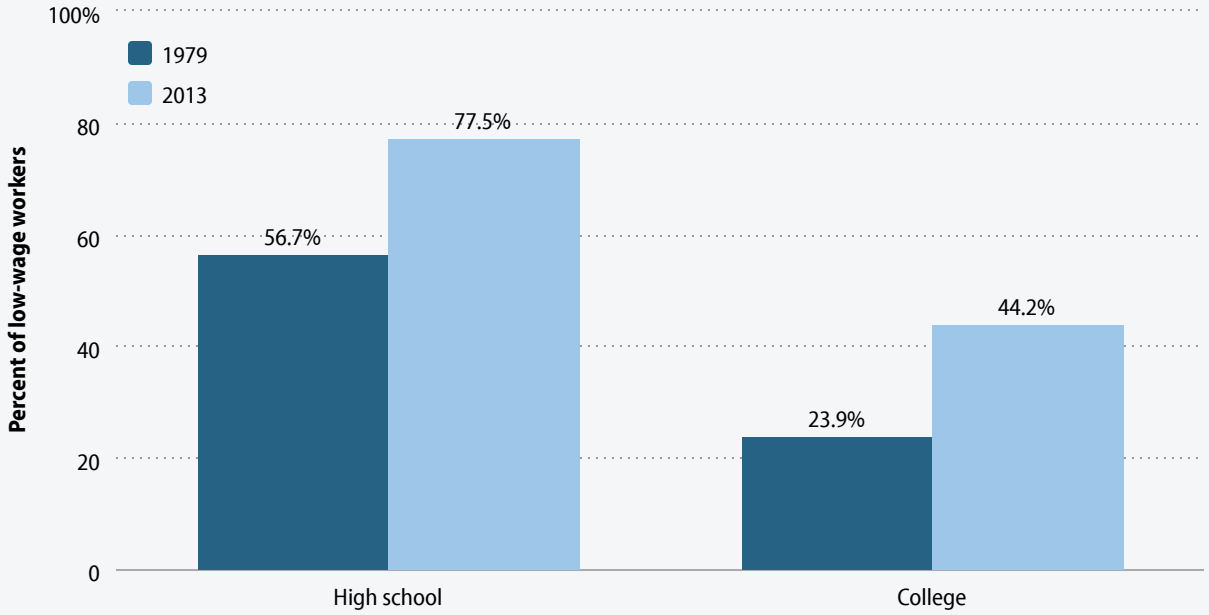
FIGURE R VIEW INTERACTIVE *on epi.org*

Educational attainment of low-wage workers, 1979 and 2013



Note: Data are for bottom fifth of wage earners. "College" means attended some college or completed college or advanced degree.

Source: Authors' analysis of Current Population Survey Outgoing Rotation Group microdata

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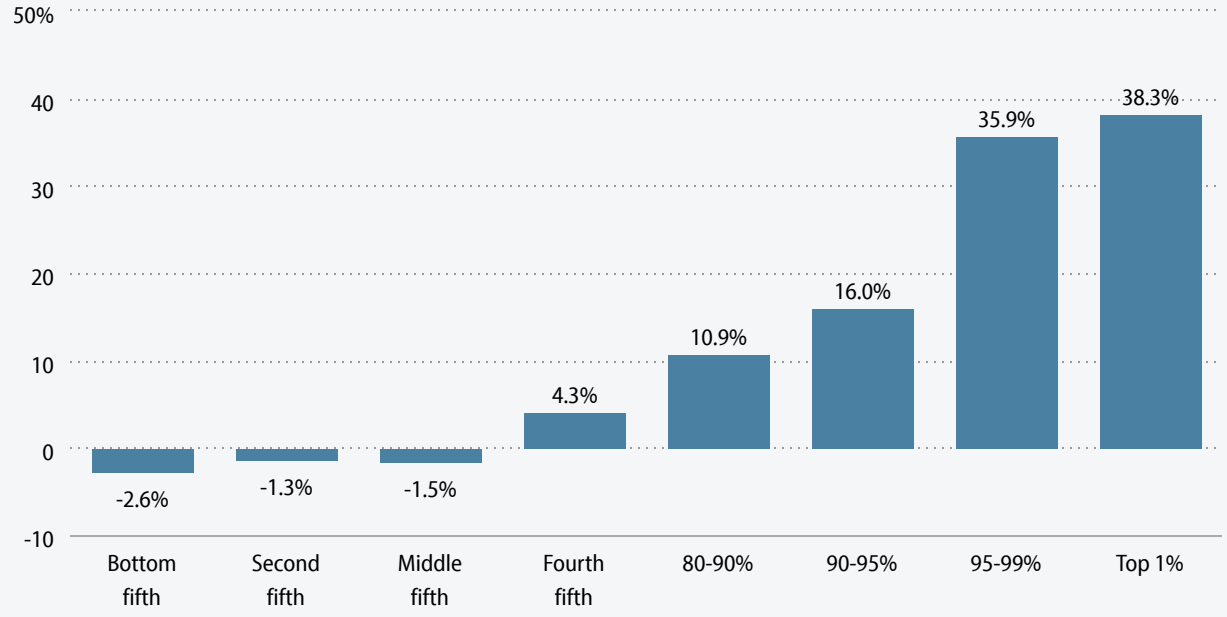
Relative to these factors, the racial composition of the U.S. population over this period (the growth of nonwhite populations with higher incidences of poverty) and changes in family structure (the growth of single-mother households) have contributed much less to increasing poverty, particularly in recent years. In fact, between 1979 and 2012, the role of income inequality in increasing poverty (7.4 percentage points) was nearly five times more important than changes in family structure (1.6 percentage points).

It is also clear from the figure that increases in educational attainment put downward pressure on the poverty rate (2.9 percentage points) between 1979 and 2012. The fact is that workers at the bottom are not only working longer (as shown in Table 7), but they are also more educated. **Figure R** shows that low-wage workers have far more education now than in 1979. In 1979, only 56.7 percent of low-wage workers had a high school degree, compared with 77.5 percent in 2013. Correspondingly, many more low-wage workers have attended at least some college or have a college degree, which the graph identifies as "college." While only 23.9 percent of low-wage workers in 1979 had some college experience or a college degree, that group had grown to 44.2 percent by 2013. Yet low-wage workers' hourly wages have not improved much over this time period.

Low-wage workers are more educated, more productive, and work more than ever before—and yet the gains from a growing economy are passing them by, due to insufficient hourly wage growth.

FIGURE S VIEW INTERACTIVE *on epi.org*

Share of total wealth growth accruing to various wealth groups, 1983–2010



Source: Authors' analysis of Wolff (2012)

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Section Four: Wages are the root of economic security for the vast majority

Extraordinarily uneven wage growth—particularly slow growth at the bottom and middle—has contributed to many chronic sources of economic stress aside from its crucial importance in driving trends in overall income inequality, poverty, and slow living standards growth for the vast majority. This section briefly links wage performance to asset building and retirement security, economic mobility, and macroeconomic stability.

Asset building and retirement security

It is now a well-recognized fact that the large majority of American retirees—present and future—are likely to rely overwhelmingly on public social insurance (Social Security, Medicare, and Medicaid) to keep them out of poverty (see Gould and Cooper 2013). The vast majority has not been able to accumulate private assets—particularly assets earmarked for financing retirement—to provide an additional income source in retirement (see Morrissey and Sabadish 2013).

One of the most striking ways to illustrate this is to simply look at the distribution of gains in net worth (the best summary measure of wealth) in the U.S. economy between 1983 and 2010 (the first and last years for which distributional measures are easily available), which is presented in **Figure S**.

The figure shows that the bottom 60 percent of households (ranked by wealth) actually *lost* net worth over that time. Households between the 60th and 80th percentiles accounted for just 4.3 percent of wealth gains. Households between the 95th and 99th percentiles accounted for 35.9 percent of wealth gains, while the top 1 percent accounted for 38.3 percent of wealth gains. In other words, 74.2 percent of wealth gains between 1983 and 2010 went to the top 5 percent.

Part of this failure of wealth to rise in recent decades can be directly tied to declining bargaining power of low- and middle-wage workers. As documented in the section on hourly compensation trends, wages *and* nonwage benefits of typical workers grew slowly over most of the past generation. One key component of nonwage compensation is, of course, employer contributions to employee retirement plans, and as we showed in that section, the share of workers with *any* employer-sponsored retirement plan has fallen in recent decades. Even worse, the type of retirement plan received by typical workers who have a plan has changed markedly in the past generation, with defined benefit pension plans becoming much rarer and defined contribution plans (i.e., 401(k)s) more common. This change constitutes a shift of retirement income risk from employers to employees. Further, this change should actually boost measured wealth in data sets like the one used for Figure S; future accruals from defined benefit plans are not included as wealth in these surveys, whereas assets accumulated in defined contribution plans are. The fact that wealth growth for the bottom 80 percent has been so anemic even with this definitional shift working in their favor is bad news indeed.

Another key bulwark against asset-building reversals for low- and moderate-income households is buffers against negative shocks. The most important of these buffers is health insurance. For the under-65 population, employers remain the most important source of health insurance coverage, so again the role of job quality dovetails with the ability of low- and moderate-income households to build (and preserve) wealth.

Thomas et al. (2013) label all of the job-based links to asset building as "employment capital." The other clear link between the wage and compensation trends reviewed in the first section of this paper and asset building is simply that in order to build assets, households need sufficient income to both maintain a decent standard of living and put some aside for savings. It is deeply puzzling how often this most basic insight is elided in debates over how to help households build assets. But if one sees a huge concentration in incomes over time, then before too long it should not be surprising to see concentration of wealth gains as well, as the share of households able to both consume enough for a decent lifestyle and set aside money for asset building shrinks.

Trying to construct an asset-building agenda that starts from the constraint of the ever-widening inequality of income is extraordinarily hard, and risks implicitly putting the blame for failure to build wealth on households themselves. Even the declining overall national savings rate has sometimes been invoked as evidence that too many low- and middle-income American households have been on a consumption binge in recent decades, and that this new acquisitiveness is blocking possibilities for wealth building. The evidence, however, certainly does not support such an interpretation. For one, it is clear that the vast majority of overall U.S. personal savings are held by the affluent. This is easy to see simply by combining the income shares of affluent households (say, the top 5 percent, who claimed 31.4 percent of overall income in 2007) with the much higher savings rates reported by this same group relative to others (as reported by, say, Cynamon and Fazzari 2013 or Dynan, Skinner, and Zeldes 2004). Clearly, any large decline in the overall savings rate will mostly be a function of changed behavior of these affluent households.

Further, the growth of personal consumption expenditures and the associated diminution of the savings rate in recent decades can be *entirely* explained by the rise in health care costs (a finding made by Barbosa et al. 2008). In real terms, U.S. households are not spending more on consumer goods—durable or nondurable—or any other large consumption category except health care. And it is simply the rising price per unit of health care that has driven the large rise in consumption spending. This reality contravenes the narrative that the increasingly irresponsible spending decisions of low- and middle-income American households are driving down savings rates and keeping them from accumulating assets.

A crucial source of wage-based wealth: Social Security

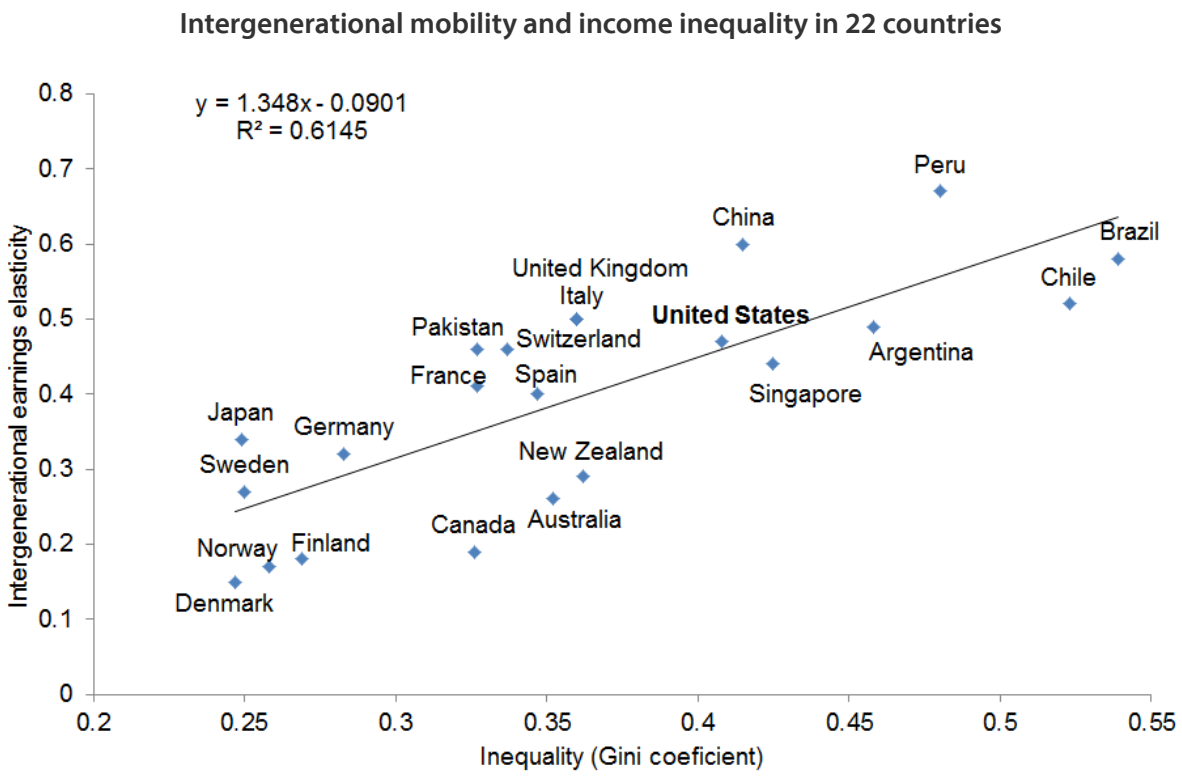
The wealth data displayed in Figure S previously do miss one aspect of American asset building crucial to low- and middle-income households' economic security: Social Security wealth. Weller and Wolff (2005), for example, show a measure of Social Security wealth more than doubles the amount of overall retirement wealth for the median near-retiree. The links between this Social Security wealth and labor market outcomes for American workers are clear.

First, one's Social Security benefit depends on one's wage earnings during his or her working career. The higher these wage earnings, the higher the Social Security wealth. Second, the primary influence in recent decades that has eroded the accounting position of the Social Security system is simply the failure of wages of the vast majority to track overall productivity growth. The Social Security tax applies only to the first $117,000 in annual earnings (in 2014), and rises over time only at the rate of *average* wage growth. Only about 6 percent of earners make more than this, but because of the rising concentration of labor earnings at the highest reaches of the distribution, more and more overall labor income is accruing over the Social Security taxable maximum. At the time of the last major Social Security reform, in 1983, the cap was set at a point that captured 90 percent of all labor earnings. By 2012, however, rising inequality within wage incomes resulted in the taxable base shrinking to just 83.1 percent of total earnings.

This erosion of the taxable base of Social Security—caused directly by the rising concentration of wage earnings—is responsible for well over a third of the current 75-year actuarial shortfall Social Security faces (Bivens 2005). Further, the redistribution of income from wage earnings to capital income in recent decades (as previously demonstrated in Table 3) also implies a reduction in the taxable base of Social Security (as capital income is not subject to Social Security taxes). This impact is likely roughly as large as the impact of rising concentration *within* wage earnings (Bivens 2013a).

Finally, one should consider another connection between rising inequality and prospects for asset building: the role of the financial sector in recent years in driving inequality (particularly at the top) and in reducing the returns to wealth-holding for low- and middle-income households. Bivens and Mishel (2013) have shown that the rise of the financial sector is a key driver of top-end inequality. Importantly, a key source of rising financial incomes is largely the wedge that the sector places between the returns it pays to savers (or, wealth-holders) versus the rates it charges borrowers. One component of this wedge is the management fees paid to financial institutions for handling workers' 401(k) retirement accounts, fees that can eat up nearly 30 percent of account holders' returns over the life of the account (see Hiltonsmith 2013). Reducing this wedge—say, by financial regulation that reduces the market power of financial institutions or by introducing passively managed universal accounts that let most Americans invest in index funds without paying exorbitant fees—would both contribute to workers' wealth building as well as reduce income inequality.

FIGURE T



Note: The higher the Gini coefficient, the higher the inequality. The higher the intergenerational earnings elasticity, the lower the extent of mobility.

Source: Authors' adaptation of Corak (2012, Figure 2)

Economic mobility

Recent data compiled by Miles Corak and popularized by economist Alan Krueger have highlighted a negative relationship between intergenerational mobility and income inequality across a broad range of countries. **Figure T**, based on Corak's data, shows this relationship, which Krueger has labeled the "Great Gatsby curve."

This has been sensibly interpreted as a cautionary tale for the United States. If the cross-country relationship shown in the figure also holds for a given country over time, the large rise in income inequality in recent years could lead to sharp reductions in intergenerational mobility. For those concerned over the future of social mobility, this provides yet another reason to see the rise in income inequality stemming from the broad failure of hourly wages to rise as a deeply worrisome trend.

Recent findings have cast some doubt on the mechanical inevitability of rising inequality stifling social mobility. Chetty et al. (2014) found that young adults entering the U.S. labor market in recent years (essentially, those who were children in the 1990s) have the same chances of moving higher (or lower) in the income distribution as did their parents. However, too many have taken too much solace from the Chetty et al. (2014) results, arguing not only that we can rest easy about any inequality–mobility link, but also even taking their results as a complete overturning of the narrative

that the U.S. economy has performed poorly for low- and middle-income Americans in recent decades. Neither of these interpretations is warranted.

For one, the Chetty et al. (2014) results, as valuable an addition to our knowledge about mobility as they are, are not the only empirical estimate of trends in intergenerational mobility. Aaronson and Mazumder (2007) have previously estimated a U-shaped pattern of mobility since 1950, with it rising for a few decades before falling again in more recent periods. For another, the Chetty et al. (2014) results actually do not directly measure intergenerational income mobility for the last (i.e., most recent) generation in their sample (those born after 1986) because this cohort does not generally have any real labor market experience yet. Instead, the scholars use college attendance and college quality as proxies for income. This is certainly defensible, but it will be interesting to see how these proxies fare as we gain more data on this cohort.

We do know that obtaining a four-year college degree has offered less and less a guarantee of decent wage growth in recent years. And we know that the dispersion of wages among college graduates has increased enormously in recent years, meaning that the college–income link may have attenuated (though this problem could be mitigated by their inclusion of college quality as well as attendance).

Additionally, who is to say that mobility would not have actually *increased* in recent decades but for the influence of rising inequality? The "Great Gatsby curve" depicted in Figure T is implicitly a warning about the simple relationship between inequality and mobility. This simple relationship could indeed hold, but the overall trajectory of mobility may depend on a host of other influences besides inequality.

Further, we should note that the Chetty et al. (2014) results that have attracted the most attention concern *relative* mobility—how far a child rises above or below the *percentile rank* of his or her parents in the income distribution. But one could also be as interested in the *difference* in expected incomes—i.e., measuring the gap in incomes of children relative to parents. And here Chetty et al. (2014, 3) highlight something important: Increasing *inequality* in the United States over the past generation results in a rise in that expected income difference because "a child's income depends more heavily on her parents' position in the income distribution today than in the past." So for those who care about social mobility, even if rising inequality does not translate over time into lower relative intergenerational mobility, it certainly makes the consequences of the "birth lottery" more significant in absolute terms.

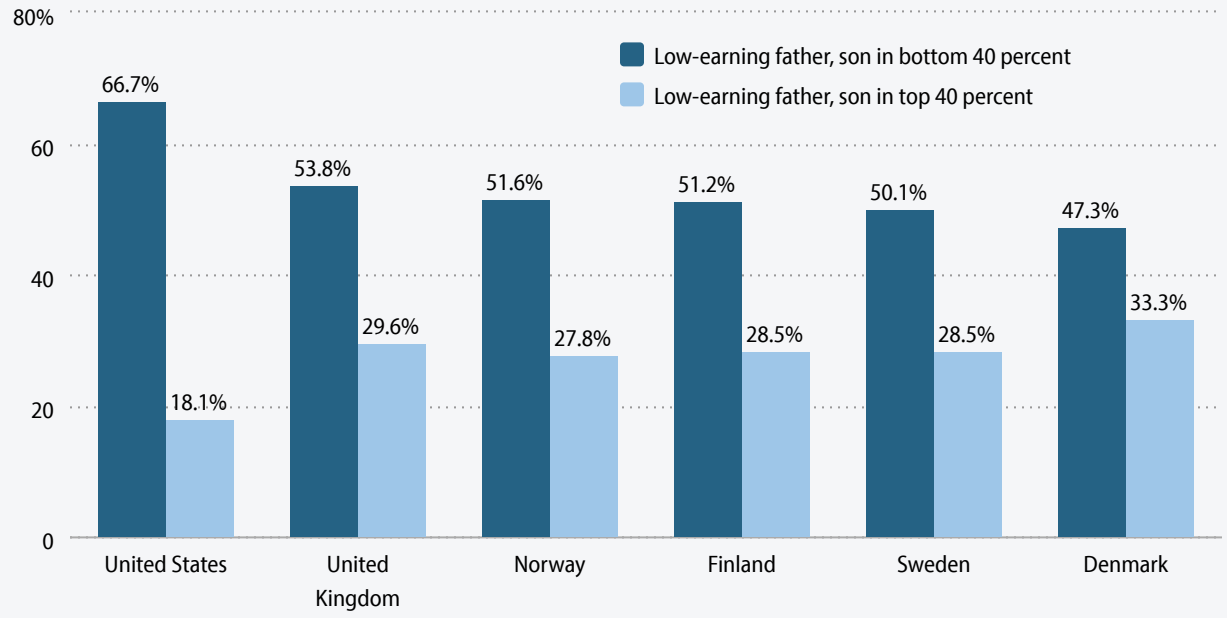
All in all, the Chetty et al. (2014) findings give some reason to be hopeful that the dire consequences for mobility of rising inequality that are implicit in the results of Figure T have not come to pass. But it seems far too premature to dismiss the possibility that rising inequality over the past generation will never damage social mobility.

Finally, we should note something important about American mobility not highlighted by Chetty et al. (2014) but usefully noted by Surowiecki (2014): It remains very low, either measured against nearly any reasonable definition of what would result from a genuinely fair economy, or (more concretely) even relative to our advanced-country peers.

One's economic position in childhood determines one's position in adulthood to a dismaying degree, and more so in the United States than in many other advanced countries. **Figure U** compares the likelihood that sons will reach different parts of the earnings distribution given a low-earning father. It shows that in the United States, a son with a low-earning father has a 66.7 percent chance of being in the bottom two-fifths of the earnings distribution, and only an 18.1

FIGURE U VIEW INTERACTIVE *on epi.org*

Probability that sons of fathers in the bottom 20 percent of the earnings distribution end up in the bottom or top 40 percent as adults, by country



Source: Authors' analysis of Jantti et al. (2006)

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percent chance of being in the top two-fifths of the earnings distribution. Looking at the United States' international peers—countries such as the United Kingdom, Norway, Finland, Sweden, and Denmark—we see that sons of low-earning fathers have a far greater chance of moving up the earnings ladder.

Finally, it is crucial to note that the existence of *some* mobility does not neutralize the ill effects of inequality. To put it simply, there will always be a bottom half (or three-quarters, or 90 percent) of the wage and income distribution, even in a world of perfect mobility. One question that implicitly arises when we express concern over inequality is whether or not we want to ensure that the living standards of those in the bottom half rise in line with economic growth.

Those who prefer to ignore inequality and focus exclusively on mobility are essentially answering "no" to this question. This view often coexists with the belief that rising inequality is simply the outcome of meritocracy fully rewarding skills and talent. According to this worldview, any attempt to increase wages at the bottom and middle above what is justified by these workers' inherent productivity would simply create economic inefficiency. A corollary to this argument that meritocracy determines wage outcomes is that although the income growth of low- and moderate-income families *as a group* is indeed lagging far behind overall average growth, our meritocratic economy allows any *individual* members of this group with talent and motivation to attain higher living standards. In a normative sense, ignoring the rise in inequality and focusing simply on mobility essentially holds that inequality can either be *explained by* or its ill effects *mediated by* rising social mobility. But of course, mobility has not been rising over the last generation. From a low level it, at best, simply stayed the same.

Put simply, there will always be rungs on the wage ladder. We think it is socially desirable to ensure that Americans can reach a higher rung than the one they were born to; in other words, social mobility is good. It is also true, however, that even those who remain on the lower and middle rungs should be able to live decently and share in our economy's growing income. Addressing the growth of wages and limiting wage inequality establishes rungs on the ladder that are both reachable and provide a decent living.

Macroeconomic growth and stability and the coming era of chronic demand shortfalls

The extreme growth in overall income inequality that was driven by the stagnation of hourly wages for the vast majority also threatens robust, sustainable macroeconomic growth going forward.

Economists tend to separate out determinants of growth into effects stemming from utilization of resources (especially labor) and effects stemming from productivity growth. Resources can be underutilized and economic growth held back by a shortfall of aggregate demand relative to potential supply (as has clearly been the case in the U.S. economy since 2007). All else equal, upward redistribution should be expected to *worsen* this demand shortfall, as households at the top of the income distribution tend to save (rather than spend) a much higher share of their incomes. Rising wages for the vast majority could reverse this.

Over the very long run, overall growth rates are dominated by what happens to economy-wide productivity growth. The bulk of evidence on long-run growth and inequality shows that the large upward redistribution of recent decades has been neutral at best for overall growth, meaning that this upward redistribution has clearly damaged income growth at the bottom and middle.

Wage growth as key policy to solve demand shortfalls (or "secular stagnation")

The case that growth over the medium to longer-run would be strengthened by broad-based wage growth that boosts underutilized resources is receiving quite a bit of attention. Recently, Krugman (2013), Summers (2013), and Stiglitz (2014) have kicked off a debate over "secular stagnation"—which is better described as chronic shortfalls in aggregate demand.

They argue that the extremely low interest rates needed to boost demand growth following both the 2001 and 2008–2009 recessions indicate strongly that there are long-term deflationary pressures pushing down aggregate demand. They point to decades-long spells of high unemployment or low capacity utilization in many countries in Western Europe and Japan as evidence that economists have perhaps been too confident that demand shortfalls are nearly always short, substantially self-correcting, and amenable to being solved simply by central banks lowering short-term interest rates.

One key suspect behind this downward pressure on demand is the rise in income inequality generated by slow hourly wage growth for the vast majority. This slow wage growth has resulted in a rising share of overall income going to wages at the very top of the distribution and to capital owners. It is a well-established fact that savings rates for high-income households are much higher than for the vast majority. This implies that, all else equal, the redistribution from low- and moderate-wage earners requires an offsetting spur to demand somewhere else in the economy.

Of course, actual events over the last 15 years suggest the need for a more nuanced story than this. Higher savings resulting from this redistribution are supposed to lead to lower interest rates, which should spur investment and boost demand to its previous level. And while the U.S. economy has indeed seen extraordinarily low interest rates over the past decade-and-a-half, they have *not* generally been driven by higher national savings—in fact, the United States has been a substantial net borrower from the rest of the world over that time. Obvious candidates for explaining why the upward redistribution did not show up as increased savings or a noticeable demand drag prior to the Great Recession are, of course, the asset bubbles in stock and housing markets.

But these bubbles are now over, and going forward, the potential demand drag stemming from upward redistribution should be taken quite seriously. Enacting policies that let low- and moderate-income households (with much higher propensities to consume) gain a larger share of economic growth would surely be useful in ensuring insufficient demand does not continue to constrain growth in the coming decade.

Inequality and growth in the long run

The relationship between overall growth rates over the very long run (driven largely by productivity growth) and inequality is one of the most contested in economics, and the empirical relationship between the two is, so far, not established. However, too many in this debate have made the implicit claim that action on ameliorating inequality needs to wait until unimpeachable evidence is in hand that rising inequality harms overall growth. This is clearly wrong. So long as it cannot be proved that rising inequality in the United States clearly *increased* overall growth, it has (by definition) harmed the incomes of the vast majority. And any proof offered of a positive link between rising inequality and growth is extraordinarily weak. Therefore, policy efforts to reverse the past generation's upward redistribution are highly likely to boost income growth for the vast majority.

Our view is that there is ample evidence that policy can indeed effect such a change. Proof can be found in the clear success of policy changes enacted over recent decades that aimed to *slow* wage growth for the vast majority by tilting bargaining power away from low- and moderate-wage workers (these policies are spelled out in the following section). Bivens (2013b) points out that these policy changes have often been defended, both contemporaneously and retrospectively, as necessary to boost economic growth rates, which were allegedly held back by policies (particularly labor standards and institutions) that distributed wage growth and bargaining power more broadly but interfered with the efficient functioning of markets.

Arguing against this interpretation is, of course, the simple fact that no overall growth bonanza resulted even from the vast accumulation of these significant policy shifts and the associated rise in inequality. In fact, rates of productivity growth have been markedly *slower* in the past 35 years than in the first three decades following World War II—despite the relative acceleration in the late 1990s and early 2000s. Instead, the U.S. economy saw slower overall growth that was much less evenly distributed than before.

There is a defensible case to be made that the slowdown in productivity that accompanied the policies that have led to unequal wage growth would have happened even if these policies were not adopted. But even in this case, the result can only be seen as an economic disaster for the vast majority—with income growth falling precipitously even while overall growth rates were sufficient to provide them much more. Further, this raises the strong possibility that a portfolio of policy changes that aimed to boost hourly wage growth for the vast majority would have *at worst* very little impact on

overall growth rates. And no impact on overall growth combined with a broader distribution of economy-wide gains translates into significantly faster living standards growth for the vast majority. This intuition—that policies aimed at reversing *upward* redistributions are neutral at worst for overall economic growth—is buttressed by a growing number of studies (see Bivens and Mishel 2013 for a survey of these).

Adding together the very strong case that broad-based wage growth will help the economy generate demand growth in the medium term with the complete lack of evidence that upward redistributions aid growth in the longer term, it is clear that boosting wage growth for the vast majority is beneficial for economic growth.

Section Five: Why has wage growth faltered for the vast majority, and what can be done?

This paper has so far argued that many dysfunctional aspects of the American economy—rising income inequality, the middle-class squeeze, unacceptably slow rates of poverty reduction, retirement insecurity, wealth inequality, rising profit shares, stagnant social mobility, and even the terribly sluggish recovery from the Great Recession—have a common root: slow growth and rising inequality of hourly wages for the vast majority of American workers.

This means that understanding the *source* of the hourly wage growth slowdown for the vast majority, and identifying effective policy levers to reverse it, are crucially important tasks. This is why we are introducing the Raising America's Pay project with this paper. The goal of this initiative is to make serious headway in identifying promising policy levers to raise hourly pay. But we will note for now our understanding of what drives stagnant wages for the vast majority and unequal wage growth, and why we think it is necessary to have a deeper understanding of the major role played by *labor market policy and business practices* (a phrase we use to capture eroded labor standards, weakened labor market institutions, new business practices, and the associated changes in norms).

The prevailing wisdom among pundits and too many in the policymaking world is that the hourly wage growth slowdown is primarily due to the failure of American workers' skills to keep up with rising demands for skill spurred by technological change. Occasionally (and more recently) some have identified globalization as another factor holding back wage growth for the vast majority. The clear thrust of both of these explanations when applied by the policymaking community is that we neither could nor should do anything to reverse (or even slow down) these influences, other than perhaps upgrade workforce skills and education. We argue the exclusive focus on globalization and technological change overlooks the key impact of *labor market policy and business practices* and understates the scope for altering wage growth with better policy.

This section begins by exploring a multitude of policy changes that have reduced workers' bargaining power and strengthened that of capital owners and corporate managers. It then examines wage gaps at specific points in the wage distribution to illustrate that these policy changes play far bigger roles in wage trends than is commonly acknowledged. The section concludes with an assessment of the impact on wages of technological change, skill deficits, and globalization.

The policy determinants of wage growth for the vast majority

The causes of stagnant wages for the vast majority and unequal wage growth are, in our view, related to intentional policy decisions, both actions that adversely affected the vast majority and others where policymakers failed to take action favoring the vast majority. The connecting principle among them is that nearly every policy change had the completely predictable effect of reducing the bargaining power of typical workers (individually and collectively), and boosting the bargaining position of capital owners and corporate managers.

The following presents a framework for understanding the changes in wage patterns—unequal overall growth that has resulted in stagnant wages for the vast majority—by first reviewing policy decisions that resulted in these wage trends and then by explaining how each of these policies affected the wage structure (for example, by widening inequality between middle and low-end wages).

The first policy change is one that significantly increased the incentives for well-placed economic actors (such as corporate executives) to more aggressively exercise their bargaining power to increase their share of overall income growth: the dramatic drop in top tax rates since the late 1970s. If such actors do indeed have such bargaining power, and if they weigh the returns from aggressive bargaining against the prospect of violating norms of fairness or sparking a revolt among company shareholders or colleagues, lower marginal tax rates make aggressive bargaining appear more worthwhile despite the potential downsides.

Piketty, Saez, and Stantcheva (2014) have shown that falling top tax rates have increased the pretax income share of the top 1 percent, and actually are statistically significant in slowing income growth for the bottom 99 percent. They argue that this provides further evidence for what they call the "bargaining channel" in driving economic outcomes.

Another tax change that has had nontrivial impacts on trends in the distribution of wage and income growth concerns the treatment of corporate executive pay. In 1993, corporate tax law was changed to allow firms to deduct only the first $1 million of executive salaries from corporate income taxes, with an important caveat: Pay above the $1 million threshold could continue to be deducted as an expense so long as it was "performance-based" (Balsam 2012). This led to an enormous change in the structure of CEO and corporate executive pay, with stock options and profit-related bonuses becoming much more popular. That this change came right before the enormous rise in stock prices in the late 1990s essentially guaranteed an explosion in the share of total wages accruing to the very top through CEO and executive pay. One can also speculate that tightly linking corporate executive pay to profits and stock prices led to a shift in corporate strategy to suppress labor costs of typical workers and boost corporate profits, leading to a rise in the share of overall income accounted for by capital income.

Besides these key policy changes that increased the incentives for wielding bargaining power at the top, a number of other policy changes have increased the *ability* of those at the top to bargain more effectively.

One key item on this list concerns economic globalization. But globalization, contrary to how it is often discussed by many in policymaking circles, is deeply influenced by American policymaking decisions (see the appendix for more on this). For instance, trade agreements signed by the United States generally contain extensive protections against influences that may reduce multinational corporations' profit rates. Indeed, to name just two examples, enforceable protections for intellectual property and against expropriation (very broadly defined) are key parts of nearly all trade

agreements. Yet enforceable protections against influences that may harm wages here or abroad (such protections include labor standards like the right to bargain collectively) are essentially non-existent. Increasing global integration with low-wage countries has the impact, as predicted by conventional economic theory, of lowering the return to labor and boosting the return to both human and physical capital. In other words, low- and moderate-wage workers are disadvantaged, whereas high-wage, well-educated workers benefit disproportionately.

Another key influence is macroeconomic policy. In perfectly competitive textbook models of wage determination, there is no room for the macroeconomic tightness of labor markets to determine pay. But evidence has repeatedly shown that the pace of wage growth for the vast majority of American workers is more rapid when unemployment rates are low, with low-wage workers benefiting more than middle-wage workers and higher-wage workers benefiting the least. This means that when macroeconomic policymakers (i.e., the Federal Reserve Board) prioritized low rates of inflation over low rates of unemployment in recent decades, this had profoundly destructive effects on wage growth for the vast majority.

Another driver of wage and income trends has been regulatory policy, particularly in regards to the financial sector. Financial deregulation has affected wage growth for the vast majority in a number of ways. First, it has unleashed finance professionals' ability to claim large rents by simply hiding risk that they should be managing. This sector has more than doubled in size relative to the rest of the economy over the past generation, and is hugely overrepresented in the top 1 percent of wage and income earners. Second, because wealth holders are significantly more inflation-averse than the rest of the population, the political power of finance has been a prime driver of the previously noted shift toward prioritizing low inflation rates over low unemployment rates. Third, the extension of financial deregulation to international capital flows has kept policymakers from addressing imbalances (i.e., the U.S. trade deficit) that result from international financial flows. If policymakers had stopped the large influx of capital flows from countries looking to manage the value of their own currency for competitive gain vis-à-vis the United States in the 2000s, this would have not only helped job growth in manufacturing, it could have deprived the financial sector of the cheap financing it used to inflate the housing bubble.

Finally, and crucially, a range of changes in what we call *labor market policy and business practices* have weakened wage growth in recent decades. The two most-visible and well-documented of these changes are the lowering of the inflation-adjusted value of the federal minimum wage and the sharp erosion in the share of the American workforce represented by a union. Both the value of the minimum wage and the density of union membership are significant determinants of the distribution of U.S. wage growth, with the minimum wage explaining roughly two-thirds of the growing wage gap between low- and middle-wage workers and weakened unions explaining a fifth to a third of the entire rise of wage inequality between the 1970s and the late 2000s (Mishel et al. 2012).

However, a range of other, far less visible changes in labor market policy and business practices have steadily eroded the standing of typical workers vis-à-vis their employers as well.

One example is the right of workers to earn overtime pay premiums for working excessive hours. Regulations that govern which workers are exempted from this right have been steadily hollowed out to exclude a larger and larger share of the workforce from receiving overtime protection. Another (particularly dispiriting) example is the difficulty some

workers (particularly immigrants) have in simply guaranteeing that they will actually be paid for the work they do (i.e., the problem of "wage theft").

Labor market policy and business practices and the erosion of labor standards and institutions that boost low- and middle-wage workers' bargaining power are severely underexplored as factors in the wage trends previously discussed. Accordingly, this category will be a prime focus of the Raising America's Pay project.

Some parts of these protective labor standards and institutions actually dovetail with the preferred policy response of the broader center-left: maintaining or deepening social insurance and safety net programs. Programs such as the EITC, unemployment insurance, Social Security, Medicaid, food stamps (i.e., SNAP), and cash welfare (i.e., TANF) are extraordinarily valuable to the living standards of the bottom half of the income distribution. But it is important to acknowledge not just these programs' direct impact on families' incomes, but also their effect on workers' bargaining power. For example, many of these programs make the consequences of a spell of unemployment less disastrous, and this empowers workers to not simply take the first job offered even if it is a bad match for them (and the employer).

Using specific wage gaps to see the fingerprints of policy in affecting wages

The broad story told by the wage trends surveyed in section one is crystal clear: The last 35 years have been mostly (excepting the late 1990s) a period when hourly wages of the vast majority lagged far behind economy-wide productivity, and progress in closing gender and racial wage gaps has been either nonexistent (for racial gaps) or disappointingly slow (for gender gaps).

However, it is not the case that each point in the wage distribution has retreated from its neighbors at a common pace. Instead, different wage gaps have evolved in distinct patterns. This section examines the evolution of these wage gaps to see if they argue for or against any particular diagnosis of the causes of rising wage inequality. What we find strongly suggests that the policy changes identified previously play far bigger roles in wage trends than is commonly granted, and the role of technological change is much smaller than commonly acknowledged.

The bottom panel of **Table 9** examines each of these wage comparisons over select years from 1979 to 2013. The (log) wage gap in each period can be interpreted as the percent difference between the wages at each point in the distribution. For instance, the 95th percentile wage was 86.9 percent higher than the 50th percentile wage in 1979. By 2013, the wage gap grew to 115.1 percent, an average annual growth rate of 0.83 percentage points.

TABLE 9

Trends in key wage and education group differences, 1979–2013

							Average annual change		
	1979	1989	1995	2000	2007	2013	1979–1995	1995–2013	1979–2013
Education wage gaps*									
College/high school	23.4%	37.8%	42.4%	45.2%	46.2%	49.3%	1.18	0.38	0.76
Advanced degree/high school	32.4%	51.2%	62.2%	64.1%	66.4%	71.4%	1.86	0.51	1.15
College or more/noncollege	28.9%	41.5%	46.1%	48.2%	49.2%	52.9%	1.08	0.38	0.71
High school/less than high school	21.0%	23.2%	27.1%	26.9%	25.8%	27.7%	0.38	0.04	0.20
Wage group wage gaps**									
50/10 (hourly)	57.8%	72.9%	69.4%	66.3%	66.3%	69.1%	0.72	-0.01	0.33
95/50 (hourly)	86.9%	94.8%	101.8%	104.4%	110.2%	115.1%	0.93	0.74	0.83
*Top 1%/90th–95th (annual)****	122.4%	163.6%	164.1%	188.2%	187.2%	182.4%	2.61	1.08	1.82

* Log point gaps based on regression-adjusted models with human capital controls including education categorical variables (advanced degree, college only, some college, less than high school with high school omitted), experience as a quartic, marital status, race, and region (4).

** Change in unadjusted log point wage gaps

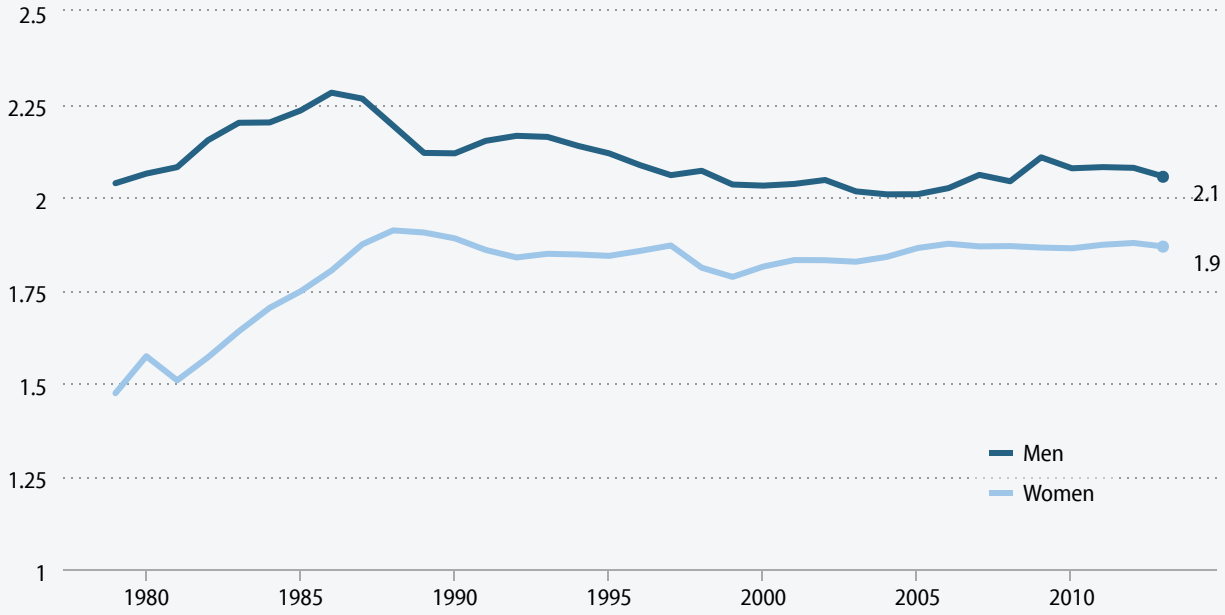
*** Data for 2013 are not available, so 2012 data are used instead.

Source: Authors' analysis of Current Population Survey Outgoing Rotation Group microdata; Kopczuk, Saez, and Song (2010); and Social Security Administration wage statistics

UPDATED FROM: Table 4.44 from *The State of Working America, 12th Edition*, an Economic Policy Institute book published by Cornell University Press in 2012

FIGURE V VIEW INTERACTIVE *on epi.org*

Wage gap* between the 50th and the 10th wage percentiles, by gender, 1979–2013**



* Ratio of workers' wages at the higher earnings percentile to workers' wages at the lower percentile

** The xth-percentile wage is the wage at which x% of wage earners earn less and (100-x)% earn more.

Source: Authors' analysis of Current Population Survey Outgoing Rotation Group microdata

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The 50/10 wage gap represents the percent difference in wages of the median worker and wages at the bottom (10th percentile) of the wage distribution (essentially measuring the wage gap between the middle and the bottom). The 50/10 wage gap expanded rapidly from 1979 to 1989 (especially among women), but has been relatively stable since then (see **Figure V**). The timing and impact of this gap's evolution and its greater rise among women immediately suggests a policy cause: The rapid widening of this gap during the 1980s coincided with a dramatic 30 percent (inflation-adjusted) erosion of the federal minimum wage between 1979 and 1989. This eroding real value of the minimum wage undercut the wages of low-wage women in particular. In fact, subsequent research has indicated that roughly two-thirds of the growth of the 50/10 wage gap among women from 1979 to 2009 can be explained by minimum-wage trends (Mishel et al. 2012, Table 4.41).

In previous research (Mishel et al. 2012), we have shown that high rates of unemployment dampen wage growth more for workers at the bottom of the distribution than at the middle, and more at the middle than at the top. Excessive unemployment in the 1980s and through 1995 hence likely had more adverse impact on low-wage workers than on middle-wage workers, especially among men. This also contributed to the growth of the 50/10 wage gap. We would conclude that this wage gap can be readily explained by policy action (or inaction, as the case may be)—specifically as concerns the minimum wage and unemployment—without needing to invoke technology or skill deficits.

Table 9 also shows the wage gap between the top 1 percent of wage earners and other high wage earners (between the 90th and 95th percentiles). The year-by-year gap can also be seen in Figure F, which traces the wage growth of the top 1 percent of earners and also those in the 90th to 95th percentiles. This wage gap between very high and high wage earners expanded more than the other key wage gaps. As we previously showed, accurately measuring this top end (particularly the top 1 percent and above) of the wage distribution is crucial to understanding American labor market performance over the past generation, and any account of what "caused" wage inequality must specifically include an explanation of this gap. The substantial growth in the wage gap at the very top, between those in the top 1 percent and other high-wage earners (say, those in the top 10 percent) is primarily the result of two factors: the superlative growth of compensation of CEOs and other top managers, and increasingly high salaries of an expanding financial sector (Mishel et al. 2012, Tables 4.42 and 4.43). Together, these two factors accounted for at least 58 percent of the growth of the income share of the top 1 percent of households and 67 percent of the increased income share of the top 0.1 percent of households from 1979 to 2005 (Mishel et al. 2012, Table 4.42).

The growth of the wage gap at the very top corresponds closely to the growth of the stock market (reflecting the stock options realized by executives that are included in their wages) and does not correspond at all to changes in education wage gaps. Thus, wage inequality at the very top cannot be readily explained by stories about educational credentials and technology. This suggests that explanations that account for corporate governance, tax policy toward executive performance pay and upper-end marginal rates, and financial sector regulation should be front and center.

The wage gap within the top half of the wage structure, as exemplified by the 95/50 wage gap (depicted in **Figure W**), has continued to rise steadily over the entire period between 1979 and 2013, though it grew more slowly after 1995. For the 1979–1995 period, this 95/50 wage gap seemed most amenable to being explained by the race between technology-driven demands for skills and the educational attainment of the American workforce, since the college wage premium grew as fast as the 95/50 wage gap. But over the full sweep of the post-1979 period, and particularly over the past two decades, it seems crucial to include a broader range of policy-driven influences that can explain the growth in this wage gap; after 1995 the 95/50 wage gap grew far faster than did the college wage premium.

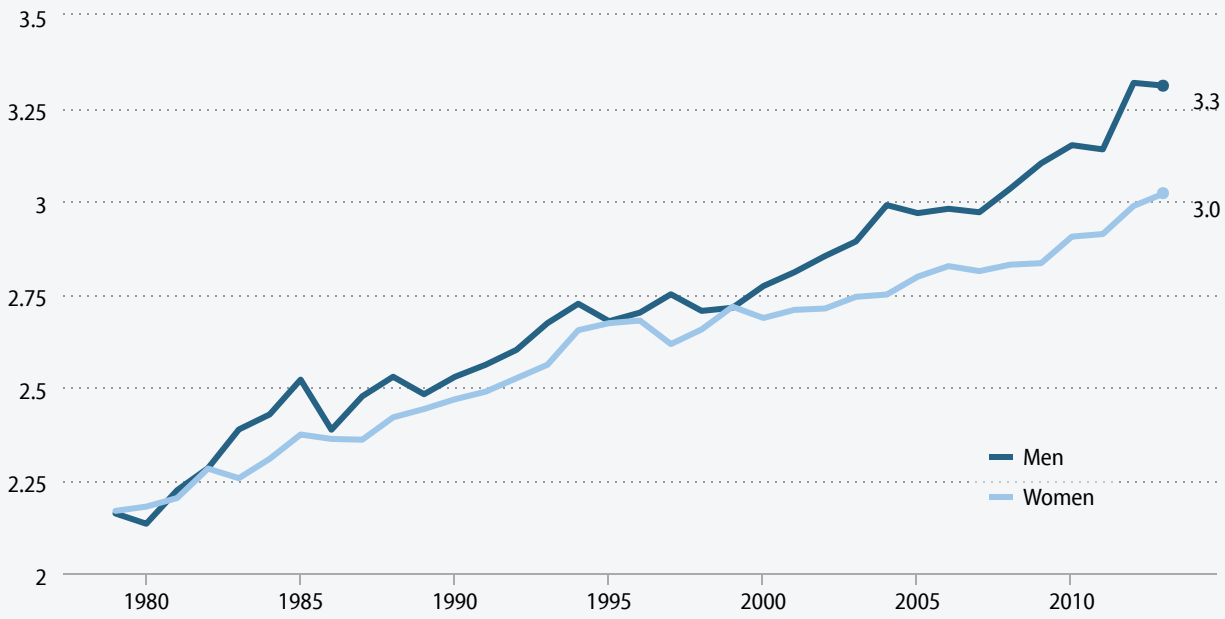
For example, international trade has been a clear factor suppressing wages in the middle of the wage structure and providing a mild boost to the top, particularly since 1995 (see Bivens 2013b). The emergence of high trade deficits and the import surge in the early 1980s put substantial pressure on mid-level wages. The steady acceleration of imports from less-developed countries has continued to put upward pressure on wage inequality, and this sort of trade likely shows up most clearly in the 95/50 wage measures.

The failure of macroeconomic policymakers to seek full employment for most of the past 35 years (referenced previously) has been another factor lifting the 95/50 wage gap, as excessive unemployment adversely affects mid-level wage earners more than high-wage earners. The importance of unemployment to wage inequality is demonstrated by the trends in the 1995–2000 period that saw the lowest unemployment rates in a generation: the 50/10 wage gap declined and the 95/50 wage gap grew modestly relative to the early 1990s or 1980s—and crucially no inflationary pressures developed.

A significant portion of this rise in the 95/50 wage ratio is clearly associated with the ongoing erosion of unionization—which led to not just reduced bargaining power of unions but has also weakened unions' ability to set norms

FIGURE W VIEW INTERACTIVE *on epi.org*

Wage gap* between the 95th and 50th percentiles, by gender, 1979–2013**



* Ratio of workers' wages at the higher earnings percentile to workers' wages at the lower percentile

** The xth-percentile wage is the wage at which x% of wage earners earn less and (100-x)% earn more.

Source: Authors' analysis of Current Population Survey Outgoing Rotation Group microdata

UPDATED FROM: Figure 4M in *The State of Working America, 12th Edition*, an Economic Policy Institute book published by Cornell University Press in 2012

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or labor standards that raise the wages of comparable nonunion workers. As noted previously, the decline of unions can explain about a third of the entire growth of wage inequality among men and around a fifth of the growth among women from 1973 to 2007 (Mishel et al. 2012, Table 4.38).

Other policy and institutional factors have also had an impact. For example, industry deregulation in the late 1970s and early 1980s had dramatic effects. Fortin and Lemieux (1997) showed that 9 percent of the workforce in the 1980s was affected by industry deregulation, and that in such industries there was a much larger erosion of middle-wage jobs. According to their estimates, between 1979 and 1988, deregulation explained about 7 percent of the rise in male wage inequality, especially for those above a low-wage threshold. Public-sector privatization and the more recent reductions in public employee compensation and collective bargaining rights bear on the 95/50 wage gap as well.

No evidence that technology and skill demands are driving wage trends

As we have noted, a particularly prevalent and convenient story explains wage inequality as a simple consequence of growing employer demand for skills and education—often thought to be driven by advances in technology. According to this explanation, because there is a shortage of skilled or college-educated workers, the wage gap between workers

with and without a college degree is widening. This is sometimes referred to as a "skill-biased technological change" explanation of wage inequality (since it is based on technology leading to the need for more skills). However, despite its great popularity and intuitive appeal, this story about recent wage trends being driven more and more by a race between education and technology does not fit the facts well, especially since the mid-1990s.

Before detailing some reasons to be skeptical of the education shortage or skills mismatch explanation of wage inequality, it is important to make clear the core issue being debated regarding the interplay between U.S. workers' educational attainment and labor market outcomes.

What's not being debated is the large upgrading in educational attainment over the past generation. Everybody recognizes that the supply of credentialed workers (those with a four-year college degree) has in fact grown a great deal in recent decades—college-educated workers comprised more than a third of the workforce in 2012, up from 14.6 percent in 1973.

Another important area of wide agreement is that the growth of education and skills is a key ingredient of *overall* economic growth. Further, providing more and better education to working-class and disadvantaged students is essential for increasing upward social mobility. Likewise, there is no debate in our view about whether it is economically wise for *individuals* to seek more education and skill development; on average, those who obtain more education and skills will do *relatively* better than those who do not. Moreover, those with more education reap non-economic benefits, such as being healthier and participating in our democracy.

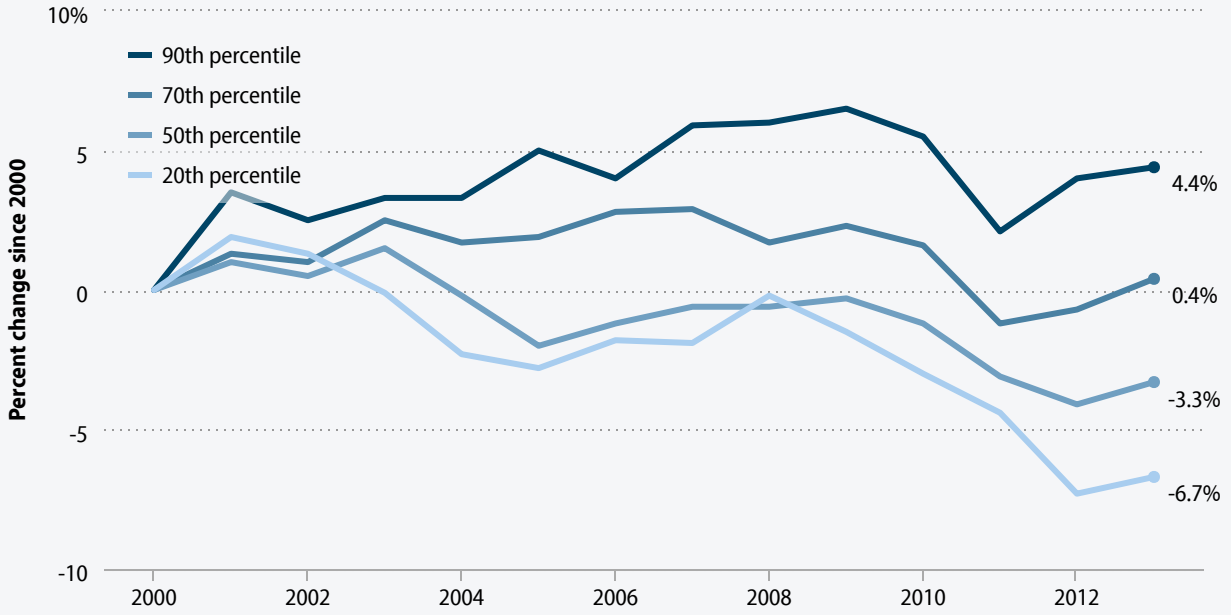
But there do remain key economic and policy questions about just how much of the past generation's rise in wage inequality has been driven by American workers losing the "race between technology and education." The relevant *economic* question is whether employer demand for college-educated workers has substantially outpaced the increased supply of such workers, thereby increasing overall wage inequality. We think not. The relevant *policy* question is whether dramatically increasing education levels (beyond the growth that is currently projected) can be expected to generate relatively equal and rising wage growth, and whether or not it will push wage growth for the vast majority closer to growth in economy-wide productivity. We think not.

We have already established one basis for skepticism that education deficits drove greater wage inequality, since the growth of wage inequality measured by many key wage gaps can be largely explained *without* reference to any skill or education shortages. The wage growth at the very top 1 percent is due to excessive executive compensation and high pay in an expanded financial sector and is not education-related. Similarly, the wage gap between low- and middle-wage workers can largely be explained by changes in the minimum wage and excessive unemployment. Moreover, since wages at the bottom and middle have grown alike since the late 1980s, it does not seem there is any special education deficiency at the bottom dragging down low-wage workers' pay.

It also turns out that, as alluded to previously, the data since 1995 are deeply inconsistent with the hypothesis that education wage gaps have driven wage inequality between middle- and high-wage workers (the 95/50 wage gap). Table 9 shows the change in the 95/50 wage gap and the key education wage gap (between those with "college or more" education and non-college-educated workers) from 1979 to 1995, 1995 to 2013, and the entire period.[14] We choose to highlight 1995 because the growth of education wage gaps slowed substantially right around that year (and these wage gaps

FIGURE X VIEW INTERACTIVE *on epi.org*

Growth in college graduate wages, by decile, 2000–2013



Source: Authors' analysis of Current Population Survey Outgoing Rotation Group microdata

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likely stopped growing because more important determinants of this gap—globalization and unemployment—began swamping any other effects).

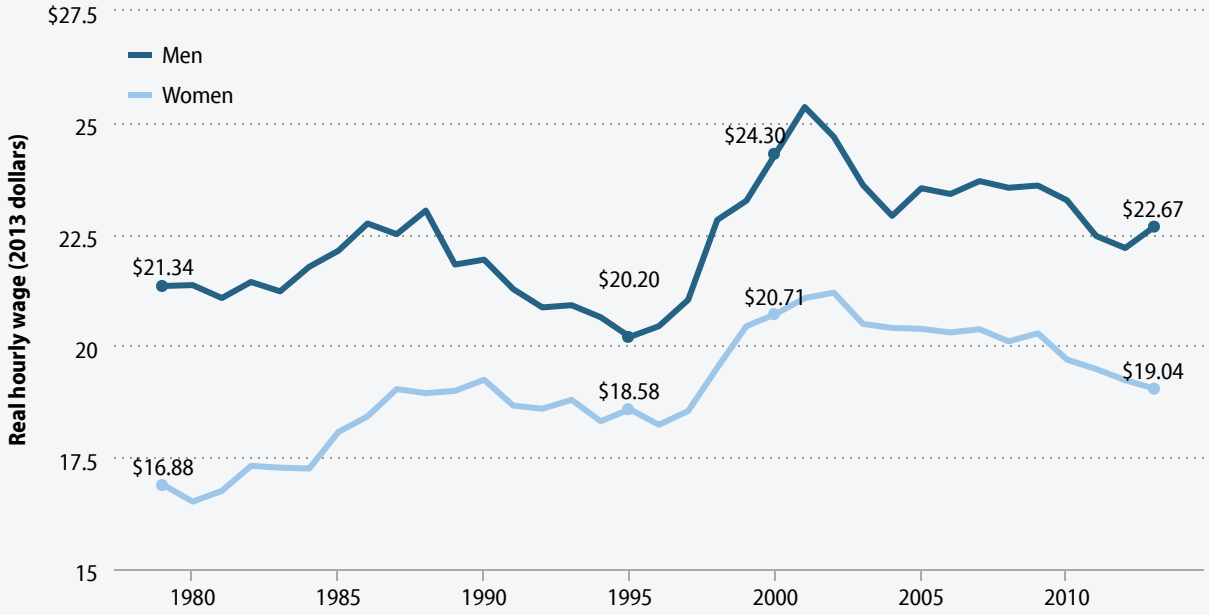
The table shows that between 1979 and 1995, the 95/50 wage gap grew roughly at the same pace as the wage gap between all college-educated workers and the rest of the workforce. While we think some have over-interpreted this correspondence by arguing that the 95/50 wage gap was driven entirely by a rising "education premium," these wage gaps at least moved at roughly the same pace. But between 1995 and 2013, growth of the college premium slowed substantially (to 0.38 from 1.08 per year), while the 95/50 wage gap continued to widen, though a bit more slowly (0.74 rather than 0.93 per year). Simply, the education wage gap has grown modestly in recent years, and the growth has not been large enough to drive the 95/50 wage gap.

Another reason to be skeptical that a technologically related demand for more credentialed workers has driven wage inequality is the fact that the workers with the key credential—four-year college graduates—have not done that well, especially in the last 10 years. **Figure X** shows that real hourly wages have declined for nearly 70 percent of the workforce with four-year college degrees since 2000. And the 90th percentile college graduate's wages are only up 4.4 percent cumulatively since 2000.

Recent college graduates have fared particularly poorly over the last decade. The wage outcomes of these workers with recently minted skills and credentials should serve as a decent barometer of both the strength of the overall labor market

FIGURE Y VIEW INTERACTIVE *on epi.org*

Real entry-level wages of male and female college graduates, 1979–2013



Note: Entry-level workers are defined as having one to seven years of experience (i.e., workers age 23–29).

Source: Authors' analysis of the Current Population Survey Outgoing Rotation Group microdata

UPDATED FROM: Figure 4Q in *The State of Working America, 12th Edition*, an Economic Policy Institute book published by Cornell University Press in 2012

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as well as the ongoing demand for credentialed workers. **Figure Y** presents trends in wages of entry-level college graduates by gender (it defines an entry-level worker as having one to seven years of experience).

Entry-level wages fell among both female and male college graduates from 2000 to 2013, 6.7 percent among men and 8.1 percent among women. This means that young college graduates who finished their education in the last five years or so are earning significantly less than their older brothers and sisters who graduated in the late 1990s. The poor wage growth in this last decade contrasts markedly with the period of strongly rising wages for entry-level male college graduates from 1995 to 2000, when wages grew 20.3 percent. In the previous 16 years, from 1979 to 1995, the male entry-level college hourly wage fell more than a dollar.

Thus, the period of falling wages since 2000 does not stand as the exception to the rule for young male college graduates. Instead, it is once again the low unemployment of the late 1990s that seems to drive exceptional results, even for highly credentialed workers. Even with the large boost provided to their wages in the late 1990s, by 2013 the hourly wage of entry-level male college graduates was just a bit over $1.00 higher than in 1979, a rise of just 6.3 percent over 34 years. The wages of young female college graduates have grown more strongly than the wages of their male counterparts over the 1979 to 2013 period, but their increase of 12.8 percent is far below overall productivity growth and too slow to erase the gap between their wages and men's wages.

More and more evidence, both anecdotal and empirical, supports the findings suggested by these wage trends. For example, many have reported on an increased prevalence of college graduates working as unpaid interns. It seems a sure sign that technological change has not led to a shortage of workers with college degrees if companies can attract these workers for free. And a recent study from the New York Federal Reserve Board has documented that since 2000 college graduates are increasingly employed in jobs that do not require a college degree (Abel, Deitz, and Su 2014).

Skill-biased technological change 2.0: Occupational polarization

There is a modified "skill-biased technological change" hypothesis that argues technology is eroding jobs and wages in middle-wage occupations but expanding opportunities and wages among low- and high-wage occupations. This "job polarization" thesis emerged around 2006 and is now popularly employed alongside the "race between technology and education" thesis.[15] However, accumulating evidence now shows that job polarization is essentially impossible to detect during the entire 2000s. Since 2000, employment in occupations in the upper half of the wage scale has not grown faster than employment in the bottom half (Mishel, Schmitt, and Shierholz 2013). This is confirmed by direct analysis (Levy and Murnane 2013, Figure 3) of occupations classified as using nonroutine, abstract reasoning: These supposed winners from digitization did not see employment expansion between 2000 and 2006 or from 2006 to 2009. Moreover, there is no strong link between the pace of employment growth and wage growth in an occupation, leaving occupation employment trends unable to explain wage inequality (Mishel, Schmitt, and Shierholz 2013). Even those in science, technology, engineering, and math (STEM) fields have seen their wages stagnate in the 2000s (Salzman, Kuehn, and Lowell 2013), and wages have also stagnated in business and management occupations (Mishel et al. 2012).

The fact is that there is surprisingly little direct and solid evidence that technological change, skill mismatches, skill shortages, and the education gap have much to do with the recent *growth* of wage inequality. Given that this once-dominant hypothesis now seems to have less and less data supporting it, other explanations regarding the stagnation of hourly wage growth for the vast majority of American workers should receive greater attention.

Section Six: The Raising America's Pay project—where future work should go

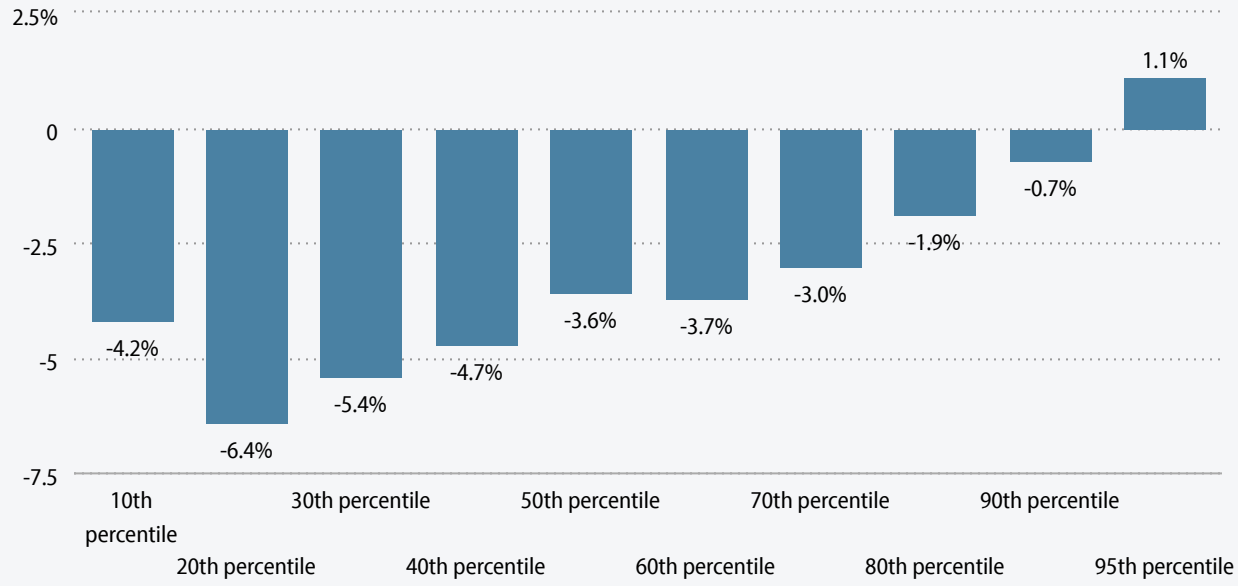
As the preceding analysis shows, a rising share of overall income growth for the last three-and-a-half decades has accrued to the already-affluent, and hourly wage growth for the vast majority has been essentially stagnant for most of this period. This stands in sharp contrast to the three decades following World War II, when income growth was broadly shared. This rising inequality has sparked recent interest in *why* this shift occurred. We think the role of intentional policy decisions needs to loom much larger in academic and policy debates over inequality, and especially would note the policy changes that have hamstrung hourly wage growth for the vast majority of American workers since the late 1970s. This analysis suggests a path for researchers and policymakers genuinely concerned about stopping the rise of inequality and generating broad-based growth in hourly pay.

Wage triage: Finally engineer a full recovery from the Great Recession

The first priority should be restoring the labor market to *at least* its pre–Great Recession health. Since the official end of the Great Recession in mid-2009, the most glaring policy choice that is increasing wage inequality is Congress's embrace of fiscal austerity, which has throttled prospects for a full recovery. As shown in **Figure Z**, between 2009 and 2013

FIGURE Z VIEW INTERACTIVE *on epi.org*

Percent change in real hourly wages at various parts of the wage distribution, 2009–2013



Source: Authors' analysis of Current Population Survey Outgoing Rotation Group microdata

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real wages fell for the entire bottom 90 percent of the wage distribution. When job opportunities are as weak as they have been in the current recovery, it is not just job seekers who suffer—workers *with* jobs also do much more poorly. That there are far more jobless workers than available jobs means employers can get and retain workers without offering significant wage increases. But Figure Z also demonstrates that even though all workers see slow wage growth when labor market conditions are poor, the effect is more dramatic further down the wage distribution. For example, wages dropped 6.4 percent for the 20th percentile worker between 2009 and 2013, but dropped "just" 1.9 percent for the 80th percentile worker. This is a key way a weak labor market exacerbates inequality.

Slow wage growth is not just a recession-induced problem

But as documented earlier, stagnant hourly wage growth for the vast majority of American workers did not just emerge in the aftermath of the Great Recession—rising inequality blocked growth for low- and middle-income households for most of the three decades leading up to the Great Recession. This rise in inequality was driven by a host of intentional policy decisions. Many of these decisions concerned policy areas that might seem remote from labor market outcomes at first glance, but which actually have powerful effects on the bargaining power of American workers.

For example, for much of the period, macroeconomic policymakers—particularly the Federal Reserve—simply did not prioritize low rates of unemployment, out of fear that such low rates would spark accelerating inflation.

Trade agreements reliably harmonized protections for corporate interests up to the highest standard but generally provided no protection against a race to the bottom on labor standards. Other aspects of international economic policy—particularly the failure to maintain a competitive value of the U.S. dollar—also undercut labor demand for the vast majority.

Falling top tax rates, preferential tax treatment of stock options and bonuses, failures in corporate governance, and the deregulation of finance all combined to increase the incentive and the ability of well-placed economic actors to claim large economic rents over the past generation (see Bivens and Mishel 2013).

Raising America's Pay by improving labor market policy and business practices

As important as all the above policies are to wages, the Raising America's Pay project will focus intently on another category of policy changes that are vitally important to the future growth of wages, but that have received far too little attention from researchers and policymakers: changes in labor market policy and business practices that have shifted bargaining power away from low- and moderate-wage workers to capital owners and corporate managers.

A key benefit of this focus on labor market policy and business practices is not just that it has been unduly ignored in most analyses of wage trends to date, it is that strengthened labor standards and institutions can deliver wage increases to workers *even during periods of weak labor market conditions*, when their individual bargaining power is significantly reduced.

Reversing the destructive changes in labor market policy and business practices encompasses a wide variety of policies, big and small, all of which would push our economy toward more broadly based wage growth.

These include things such as increasing the minimum wage, which, in inflation-adjusted terms, is currently more than 25 percent below its peak in 1968, despite a low-wage workforce that is much older and more educated. It also requires an update to labor law, which has not come close to keeping pace with dramatically increased employer aggressiveness in fighting union organizing efforts. It could include a boost to the dramatically eroded enforcement of existing employment law to counter "wage theft," a practice that is unfortunately rampant (particularly among vulnerable immigrant communities) in the low-wage labor market (Bernhardt et al. 2009). It could mean raising the salary threshold for the exemption to the overtime rules of the Fair Labor Standards Act, which has been allowed to fall to a level that is less than the poverty-level income for a family of four. It could mean ending the inappropriate misclassification of employees as independent contractors when that damages their living standards.

Other issues include providing more avenues for employees to challenge employers through court action (a right continuously whittled down in recent decades) and government labor standards enforcement. Providing decent labor standards for guestworkers (particularly allowing them to change employers) and bringing undocumented workers into the formal labor market, where standards are higher and enforced, would serve to raise wages. Business practices such as subcontracting and franchising, which remove the key drivers of low wages and job insecurity (large firms such as Wal-Mart or McDonald's) from the scope of standards enforcement or worker organizing, also need to be addressed.

The Raising America's Pay project aims to examine changes in labor market policy and business practices such as these, as well as examine what other changes have occurred in recent decades (or what improvements in labor market policy

and business practices have not occurred, such as paid family leave) that have potentially harmed prospects for wage growth for the vast majority of American workers.

Tax/transfer policy and "predistribution": An unbalanced portfolio for boosting incomes

At the most basic level, there are essentially two main ways to reverse the upward redistribution of wages and incomes documented in this report.

One is to simply *re*-redistribute through taxes and transfers, with stronger social insurance (for example, expanded Social Security), guaranteed retirement accounts, improvements in the Affordable Care Act, a stronger safety net, and expanded wage subsidies like the earned income tax credit. Paying for this in large part with significantly higher marginal tax rates for those with high incomes would have the added positive effect of reducing the incentive for rent seeking at the top.

Another track would focus on policies that impact the *wages workers receive in the labor market*, *pre*-taxes and transfers. Some have labeled this track as focusing on "predistribution" (for example, Hacker 2011). This means directly addressing the policy choices mentioned earlier that led to the skewing of wages—targeting genuinely full employment, making the rules of globalization fairer to workers, changing corporate governance to reform uncompetitive labor markets for corporate executives, and changing labor market policy and business practices to support workers' wages.

We need both tracks. While we support deepening the tax-and-transfer system that boosts incomes for low- and moderate-income Americans whenever feasible, if nothing is done to change the policies that have led to increasing wage inequality, it seems certain that income inequality will continue rising. This logically flows from the fact that if increased inequality continues to suppress hourly wage growth for the low-wage workforce, then we would find ourselves in the untenable position of needing *more* tax credits and *more* transfers each year to simply keep after-tax income inequality stable, let alone somewhat reversing recent decades' upward income and wage redistribution.

Further, other than broad social insurance like Social Security and Medicare, taxes and transfers are better suited to helping low-income households. Yet the problem of stagnant wages and rising inequality is not something that has affected just poor Americans. The vast middle of the wage distribution has also seen stagnating hourly wages over the last generation as the benefits of productivity growth have been captured by those at the very top. For example, the earned income tax credit is an important program that provides wage subsidies to low-wage workers who live in low-income households, and it should be expanded. However, it is difficult to imagine an expansion that could make up for the fact that, all else equal, the *entire bottom 90 percent* of wage earners would now be earning 15.1 percent more in wages every year if wage inequality had not increased since 1979.[16] Addressing that gap will require halting or reversing the skewing of market wages.

Finally, there is little reason to believe that meddling in the pre–tax-and-transfer wage distribution would be particularly bad for economic efficiency or growth. Ample research has proven that the real-life labor market does not act like a perfectly competitive spot market for a homogenous good. Instead, bargaining power is an important determinant of wages, and policies that boost the power of low- and moderate-income workers often do so without any negative fallout. This can be seen most clearly in the now-enormous literature showing that increasing the minimum wage has no

discernible impact on employment. The malign effects of many labor interventions that are predicted in the simplest models of labor markets—whether they be legislated minimum wages, labor market protections, increased generosity of unemployment compensation, high degrees of centralization of wage bargaining—are very rarely found in actual data. Does this mean policymakers can always and everywhere assume that they have *carte blanche* to legislate the wage structure? Surely not. But it does mean that labor markets are much more flexible than the most naïve models would expect.

These two tracks should instead be viewed as strongly complementary—the "taxes and transfers" track offsets the impact of the skewing of market wages, while the "market wages" track, by halting or reversing the skewing of market wages in the first place, means taxes and transfers will not have such a heavy lift.

Conclusion

All in all, a strong case can be made that rising inequality and the disappointing growth of living standards for the vast majority have clear policy roots. We hope that the Raising America's Pay project will help further expose these roots and provide a roadmap for a different policy direction—one that aims to boost, not throttle, hourly pay growth for the vast majority.

We also hope that exposing the policy roots of inequality and the middle-class squeeze will prove empowering for advocates trying to reverse these trends. If inequality and the middle-class squeeze were simply the unfortunate outcome of inexorable economic forces (like shifts in technology), then the scope of policy responses would be much narrower. But because these trends have instead been caused by a whole spectrum of policy changes that have accreted over the past generation, this means that reversing these trends need not be accomplished in one fell swoop. Instead, there will be numerous chances for those who would like to see America's workers get steady pay raises to have their voices heard. The fast food workers' campaign for a living wage is one such opportunity. And the recent announcement that the Obama administration will push to expand overtime protections is another. In short, there will be no single victory on the push to raise America's pay. Rather, there can only be a steady, sustained campaign on a number of fronts to make headway on this crucial issue.

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Appendix: Why globalization is affected by policy and does not make it impossible to generate wage growth for American workers

After technology, globalization is often cited as another fundamental driver of wage inequality that either cannot or should not be directly addressed by policymakers, except perhaps through compensating changes in taxes and transfers.

This is actually a stunning change from what was nearly the consensus among mainstream economists as recently as a decade ago that globalization should *not* be accused of significantly contributing to inequality. And this claim that trade was not driving wage trends held even as the *rationale* for its non-effect completely reversed.

Some very short background is in order. Nearly all of the debate over trade's impact on inequality is waged using some variant of the Heckscher-Ohlin (HO) model of trade. In this model, because the U.S. economy is abundant in capital (both human and physical), growing opportunities to trade, particularly with poorer trading partners, will lead to the United States specializing in capital-intensive production while importing goods that are labor-intensive. This shift away from labor-intensive to capital-intensive production should be expected to boost returns to capital and reduce returns to labor, worsening inequality. But for years economists largely held that this textbook HO effect was not significant in determining U.S. wage trends, even as the *reason* for its failure to appear shifted radically.

In 1993, for example, the title of a paper coauthored by noted trade theorist Jagdish Bhagwati labeled fears that trade could be driving wage inequality an episode of "Marx striking again." In this paper, Bhagwati and Dehejia argue that trade had *not* exacerbated wage inequality because the goods produced by the United States and goods produced by our poorer trading partners were substantially noncompeting. That is, if the United States produced no footwear, then an increase in the potential global supply of shoes (say, because China joined the world trading system) would not (indeed could not) harm American wages.

In 2008, Robert Lawrence of the Peterson Institute argued in a book that trade still had no significant impact on American wage inequality, but this time the argument largely depended on the claim that because the United States and poorer countries (particularly China) traded goods back and forth that were *so similar* in how they were produced, there was no significant impact on relative factor demands stemming from this trade, and hence no pressure on wage inequality.

So, in less than 20 years imports apparently transformed from being substantially noncompeting with U.S. production to being *exactly identical* to U.S. production. But never in between did differentiated imports compete with U.S. goods and affect U.S. wages.

Now, however, globalization is routinely invoked by economists as an exogenous, fundamental force that drives inequality and that cannot be directly addressed by policy. This latter take is wrong for three reasons. For one thing, policy absolutely conditions the impact of globalization on U.S. outcomes. For another, much of the impact of globalization on American wages does not stem simply from the HO channels whereby trade affects supply and demand in perfectly competitive labor markets; instead, globalization often serves simply to reduce the bargaining power of U.S. workers. Finally, we do grant that some portion of globalization's impact may not be optimally addressed *directly* through changes to international economic policy, but would argue that these impacts do call for a response from social insurance and

transfers—and (crucially) that the magnitude of the required compensation is much larger than is generally acknowledged in this debate.

Policy conditions globalization's impacts

It seems clear that much of the damage done by global integration is wrought, or at least greatly amplified, through the rules that govern this integration (rules set both by international trade treaties and the policies enforced by international organizations like the World Trade Organization and the International Monetary Fund). Most trade treaties, for example, contain hundreds of pages of explicit, enforceable protections for international investors, and often include harmonization of investor protections up to the most protective level. Trading partners of the United States, for example, have to adopt standards for intellectual property and copyright protection that approach (or sometimes even exceed) U.S. levels. This is very good for shareholders and executives at pharmaceutical, software, and entertainment companies, but offers no benefit at all to most U.S. trading partners. Conversely, there are essentially no enforceable protections in trading agreements for the interests of labor either in the United States or in trading partner countries.

Another example is exchange rate policy, which can be a powerful amplifier of globalization's impacts. The overvalued U.S. dollar of the past two decades has reduced U.S. import prices, acting almost like a tariff-cutting trade agreement on steroids.

Globalization impacts bargaining power, not just relative demand and supply

Much of the impact of globalization on American wages likely does not run simply through the HO channels identified above. Instead, globalization affects wages through its influence on bargaining power of different groups of workers. In this case, if globalization is actually influencing bargaining power rather than the relative demand and supply of labor in competitive labor markets, the range of potential policy options to respond to this reduction in bargaining is greatly expanded. For example, one can simply boost workers' bargaining power through other channels.

Even globalization's textbook impacts are large and require compensation

Finally, we do grant that some of the impact of globalization on American wage inequality does indeed come from traditional HO channels. In this model, falling prices for import-competing production will (all else equal) reduce the wages paid to workers throughout the economy who work in import-competing sectors and who resemble the workers in import-competing sectors in important aspects such as education and work experience. That is, landscapers with less than a four-year college degree may not lose their jobs because of increased competition in textile manufacturing, but their wages can be depressed by having to compete with laid-off textile workers who have less than four-year college degrees for the remaining jobs open to those with these credentials.

In the case of damages from globalization stemming from HO channels, we largely agree with what is a broad center-left consensus: Compensation for workers on the wrong end of global trade flows should be forthcoming. We would note that this compensation is generally an order of magnitude (at least) larger than is commonly offered in policy, but it at least gets the dynamic right.[17] An obvious mechanism to provide this compensation is through deeper and possibly more redistributive social insurance.

We would also agree that in this respect, the optimal response to inequality induced by trade through this traditional channel does not necessarily look that much different from the optimal response to inequality induced by technological change. We would note, however, that our reading of the evidence indicates that the impact of trade even through this channel alone is likely larger than that of technological change. Further, as a matter of general principle, the *ex ante* bias of technological change, and hence its impact on inequality, is not predictable. There have clearly been periods in the past when technological change likely favored less-credentialed workers over owners of human and physical capital. The impact of global integration through the traditional HO channel is, however, *completely* predictable: As the United States increasingly integrates with a much-poorer global economy, the return to pure labor will fall, and returns to (human and physical) capital will rise.

Given all of these considerations, inequality driven by globalization requires analytical tools and policy responses very different from those considered in response to inequality generated by technological change.

Endnotes

1. As we note later in the paper, what we refer to as "non-elderly" households is actually all households *except* those classified as "elderly and childless." As we explain in that section, we think this is an acceptable abbreviation.

2. The wage and compensation measures examined in Figure A were taken from publicly available data produced by the Bureau of Labor Statistics (BLS) and the Bureau of Economic Analysis (BEA). Table 1 uses microdata from the Current Population Survey (CPS).

3. Hispanic wage trends are likely affected by composition changes, with more Hispanics being immigrants in the latter period.

4. We should note that compositional changes are probably more important in influencing trends across racial and ethnic groups than they are even across other wage measures.

5. Hourly compensation is derived from inflating the average wages of production/nonsupervisory workers from the Bureau of Labor Statistics Current Employment Statistics by a compensation-to-wage ratio. The compensation-to-wage ratio is calculated by dividing the average total compensation (wages and salaries plus benefits) by the average wage and salary accruals of all full- and part-time employees from the Bureau of Economic Analysis National Income and Product Account interactive tables.

6. The employer-provided health benefits in this table are deflated using a medical-care specific price deflator. We do this because the normal deflator we use in this paper—the CPI-U-RS—does not include the value of health care provided by employers, and hence would be the wrong way to deflate nonwage benefits.

7. Bottom-fifth income growth is buoyed substantially in the CBO data by the very rapid increase in health care costs. Because these households receive a large share of their overall income from health care–related transfers (Medicare and Medicaid), and because these transfers tend to rise in line with total health care costs (which have risen much faster than other prices), this boosts the nominal incomes of the bottom fifth significantly.

8. The Piketty and Saez data are slightly more up-to-date than the CBO data; for the years between 1979 and 2010 the top 1 percent account for 82.9 percent of the rise in average income, and between 1979 and 2007 the top 1 percent account for 59 percent of the rise.

9. The 1.6 percentage-point increase in business income between 1979 and 2007 is likely dominated by the growth of dividend payments to owners of S corporations, making this category of income a bit more "capital-like" than is often appreciated. Just between 1991 and 2007, dividends to S corporation owners rose by more than 2 percent of total U.S. gross domestic product.

10. We should note one caution on interpreting the large contribution made by labor compensation to these trends: A large share of labor compensation of the highest-income households is likely due to exercised stock options and bonuses, both of which are much more tied to developments in capital markets than in labor markets. Freeman, Blasi, and Kruse (2011), for example, note that in 2006 roughly $65.1 billion in labor compensation was actually the result of exercised stock options, while Jaquette, Knittel, and Russo (2003) have estimated that total "spread income" (the exercise of nonqualified stock options) was $126 billion in 2000, and was even $78 billion in 2001, following the stock market decline.

11. This presumes, of course, that overall income growth over the period is unaffected by income distribution. We make the case in previous work (Bivens and Mishel 2013) that there is no evidence to support worries that a more equal distribution of income growth in the past generation would have somehow impeded average growth rates.

12. There are a small share of households with children headed by a householder over age 65, and there are also over-65 members of households headed by a householder under age 65 (multigenerational households, for example). That said, we think that combining the non-elderly, childless group with all households with children should skew heavily (if a bit less so over time) toward households that must rely on labor incomes for the vast majority of their total household income.

13. We should note that even if we used the more inclusive supplemental poverty measure from Figure L to undertake the statistical exercise we performed in Figure K, the poverty rate today would still be at or near zero in the absence of rising inequality.

14. Table 9 presents the gaps in "logged" form, and the change in gaps are log point changes. We do so because the education wage gaps are estimated using regressions with logged wages as the dependent variable, and consistency required computing the other wage gaps as log wage gaps. The results are somewhat different if all gaps are converted to percent differentials, but none of our conclusions would change. A more comprehensive test is made examining the contribution of between-group and within-group variation to the overall change in the log variance of wages, using a simple wage equation. Education variables are by far the most important controls. Over 1979–1995 between-group variation explains 55 percent of total variation among men but can only explain 24 percent of the variation for the 1995–2007 period. Between-group variation holds up better among women, explaining 51 percent of the variation over 1979–1995 and 42 percent over 1995–2007.

15. Some analysts (see Brynjolfsson and McAfee 2014) employ both of them even though these narratives conflict. Specifically, the education narrative says that the more education one has, the better one will do with modern technology in the post-1979 period. In fact, those with the least education/skills have fared comparably to those with mid-level skills and education since the late 1980s, as the 50/10 wage gap shows. The polarization narrative suggests that wages of those in the bottom will do better than those in the middle, the opposite of the education narrative. A stable 50/10 wage gap is inconsistent with polarization as well.

16. This calculation is from the data in Figure I. It calculates how much higher real annual wages would be for the bottom 90 percent if the bottom 90 percent had seen the same wage growth as the overall average between 1979 and 2012.

17. On the size of required compensation for trade's HO impacts, see Bivens (2008).

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